Course: Math 8

Week 1 Quiz

Question 1: Convert the decimal 0.125 to a fraction in lowest terms.
a) 1/4
b) 1/8
c) 2/5
d) None of the above

Question 2: Convert the decimal 0.6 to a fraction in lowest terms.
a) 3/5
b) 2/5
c) 5/3
d) None of the above

Question 3: Convert the decimal 0.75 to a fraction in lowest terms.
a) 3/4
b) 1/2
c) 2/3
d) None of the above

Question 4: Convert the decimal 0.333 to a fraction in lowest terms.
a) 1/3
b) 2/3
c) 1/2
d) None of the above

Question 5: Which of the following numbers is irrational?
a) 0.5
b) 1/3
c) √5
d) 3/4

Question 6: Which of the following numbers is rational?
a) π
b) √2
c) 0.25
d) e

Question 7: Which of the following numbers is irrational?
a) 0.2
b) 1/5
c) √7
d) 2/3

Question 8: Which of the following numbers is rational?
a) √3
b) -0.75
c) 0.666666...
d) e

Question 9: Which of the following statements is true about a rational number?
a) It can be expressed as a fraction.
b) It can be expressed as a decimal that terminates or repeats.
c) It can be expressed as a square root.
d) It can be expressed as an infinite non-repeating decimal.

Question 10: Which of the following statements is true about an irrational number?
a) It can be expressed as a fraction.
b) It can be expressed as a decimal that terminates or repeats.
c) It cannot be expressed as a square root.
d) It can be expressed as an infinite non-repeating decimal.

Answers:

Question 1: b) 1/8
Question 2: a) 3/5
Question 3: a) 3/4
Question 4: a) 1/3
Question 5: c) √5
Question 6: c) 0.25
Question 7: c) √7
Question 8: b) -0.75
Question 9: a) It can be expressed as a fraction.
Question 10: d) It can be expressed as an infinite non-repeating decimal.

Week 2 Quiz

Question 1. Which two whole numbers does the square root of 8 fall between on the number line?
a. 2 and 3
b. 3 and 4
c. 4 and 5
d. 5 and 6

Question 2. Which two whole numbers does the square root of 50 fall between on the number line?
a. 6 and 7
b. 7 and 8
c. 8 and 9
d. 9 and 10

Question 3. Which two whole numbers does the square root of 20 fall between on the number line?
a. 4 and 5
b. 5 and 6
c. 6 and 7
d. 7 and 8

Question 4. Which two whole numbers does the square root of 15 fall between on the number line?
a. 3 and 4
b. 4 and 5
c. 5 and 6
d. 6 and 7

Question 5. Which two whole numbers does the square root of 3 fall between on the number line?
a. 1 and 2
b. 2 and 3
c. 3 and 4
d. 4 and 5

Question 6. Which two whole numbers does the square root of 27 fall between on the number line?
a. 5 and 6
b. 6 and 7
c. 7 and 8
d. 8 and 9

Question 7. Which two whole numbers does the square root of 45 fall between on the number line?
a. 6 and 7
b. 7 and 8
c. 8 and 9
d. 9 and 10

Question 8. Which two whole numbers does the square root of 12 fall between on the number line?
a. 3 and 4
b. 4 and 5
c. 5 and 6
d. 6 and 7

Question 9. Which two whole numbers does the square root of 5 fall between on the number line?
a. 2 and 3
b. 3 and 4
c. 4 and 5
d. 5 and 6

Question 10. Which two whole numbers does the square root of 17 fall between on the number line?
a. 4 and 5
b. 5 and 6
c. 6 and 7
d. 7 and 8

Answer Key
1. a. 2 and 3
2. b. 7 and 8
3. a. 4 and 5
4. a. 3 and 4
5. a. 1 and 2
6. a. 5 and 6
7. a. 6 and 7
8. a. 3 and 4
9. a. 2 and 3
10. a. 4 and 5

Week 3 Quiz

Question 1. John told his friend about a new video game. His friend told 2 of his friends about it. If each person tells 2 people about the game, how many people will find out about it after 10 days?
a) 512
b) 1024
c) 2047
d) 4096

Question 2. Mary told her friend about a new book. Her friend told 3 of her friends about it. If each person tells 3 people about the book, how many people will find out about it after 5 days?
a) 81
b) 162
c) 243
d) 364

Question 3. What happens to the quantity in an exponential word problem as time progresses?
a) It decreases.
b) It increases.
c) It remains the same.
d) It first increases, then decreases.

Question 4. Which of the following is an example of exponential growth?
a) The height of a tree as it grows.
b) The spread of a virus in a population.
c) The speed of a car as it accelerates.
d) The distance a person walks in a day.

Question 5. A bacteria splits into 4 new bacteria each day. How many bacteria will you have after 4 days?
a) 64
b) 128
c) 256
d) 512

Question 6. If a quantity doubles every day, this is an example of:
a) Linear growth
b) Exponential growth
c) Logarithmic growth
d) Quadratic growth

Question 7. A rumor spreads in a school such that each student tells 2 other students about it each day. How many students will know the rumor after 7 days?
a) 64
b) 2187
c) 256
d) 512

Question 8. What is the key difference between linear growth and exponential growth?
a) In linear growth, the quantity increases by a constant amount, while in exponential growth, the quantity increases by a constant factor.
b) In linear growth, the quantity increases by a constant factor, while in exponential growth, the quantity increases by a constant amount.
c) Linear growth involves multiplication, while exponential growth involves addition.
d) Linear growth involves addition, while exponential growth involves subtraction.

Question 9: A YouTube video goes viral such that each viewer shares it with 3 other viewers each day. How many viewers will have seen the video after 5 days?
a) 81
b) 162
c) 243
d) 324

Question 10. If a population of bacteria doubles every hour, this is an example of:
a) Linear growth
b) Exponential growth
c) Logarithmic growth
d) Quadratic growth

Answer Key:

1. c) 2047
2. d) 364
3. b) It increases.
4. b) The spread of a virus in a population.
5. c) 256

6. b) Exponential growth
7. b) 2187
8. a) In linear growth, the quantity increases by a constant amount, while in exponential growth, the quantity increases by a constant factor.
9. c) 1024
10. b) Exponential growth

Week 4 Quiz

Question 1: Solve the square root problem and simplify √144
a) 9
b) 12
c) 15
d) None of the above

Question 2: Solve the square root problem and simplify √225
a) 11
b) 13
c) 15
d) None of the above

Question 3: Solve the square root problem and simplify √169
a) 10
b) 12
c) 13
d) None of the above

Question 4: Solve the square root problem and simplify √256
a) 14
b) 16
c) 18
d) None of the above

Question 5: Solve the square root problem and simplify √196
a) 12
b) 14
c) 16
d) None of the above

Question 6: Solve the square root problem and simplify √121
a) 10
b) 11
c) 12
d) None of the above

Question 7: Solve the square root problem and simplify √320
a) 16√5
b) 20√2
c) 8√5

d) None of the above

Question 8: Solve the square root problem and simplify √162
a) 9√2
b) 6√3
c) 18
d) None of the above

Question 9: Solve the square root problem and simplify √200
a) 10√2
b) 20√5
c) 4√50
d) None of the above

Question 10: Solve the square root problem and simplify √48
a) 2√6
b) 4√3
c) 6√2
d) None of the above

Answers:

Question 1: b) 12
Question 2: c) 15
Question 3: c) 13
Question 4: b) 16
Question 5: b) 14
Question 6: b) 11
Question 7: c) 8√5
Question 8: a) 9√2
Question 9: a) 10√2
Question 10: b) 4√3

Week 5 Quiz

Question 1: Write 10^2 as a number
a) 100
b) 10
c) 1,000
d) None of the above

Question 2: Write 10^-2 as a number
a) 0.01
b) 1
c) 100
d) None of the above

Question 3: Write 10^0 as a number
a) 0

b) 1
c) 10
d) None of the above

Question 4: Write 10^-4 as a number
a) 0.0001
b) 10,000
c) 0.1
d) None of the above

Question 5: Write 10^-5 as a number.
a) 0.00001
b) 0.0001
c) 0.001
d) None of the above.

Question 6: Write 10^-9 as a number.
a) 0.00000001
b) 0.000000001
c) 0.0000000001
d) None of the above.

Question 7: Write 10^9 as a number.
a) 1,000,000
b) 10,000,000
c) 100,000,000
d) 1,000,000,000

Question 8: Write 10^12 as a number.
a) 1,000,000,000,000
b) 10,000,000,000,000
c) 100,000,000,000,000
d) 1,000,000,000,000,000

Question 9: Write 10^4 in words.
a) Ten thousand
b) One thousand
c) One hundred thousand
d) One million

Question 10: Write 10^6 in words.
a) One hundred thousand
b) One million
c) Ten million
d) One billion

Answers:

Question 1: a) 100

Question 2: a) 0.01
Question 3: b) 1
Question 4: a) 0.0001
Question 5: a) 0.00001
Question 6: b) 0.000000001
Question 7: d) 1,000,000,000
Question 8: a) 1,000,000,000,000
Question 9: a) Ten thousand
Question 10: b) One million

Week 6 Quiz

Question 1. Write 5.6 x 10^3 in standard form
a) 5600
b) 560
c) 56
d) 5.6

Question 2. Write 0.000045 in scientific notation
a) 4.5 x 10^-5
b) 4.5 x 10^-4
c) 4.5 x 10^-6
d) 4.5 x 10^-3

Question 3. Write 7.2 x 10^4 in standard form
a) 720
b) 7200
c) 72000
d) 72

Question 4. Write 0.00067 in scientific notation
a) 6.7 x 10^-4
b) 6.7 x 10^-3
c) 6.7 x 10^-5
d) 6.7 x 10^-6

Question 5. Write 8.9 x 10^2 in standard form
a) 890
b) 89
c) 8900
d) 8.9

Question 6. Write 0.00089 in scientific notation
a) 8.9 x 10^-68
b) 8.9 x 10^-3
c) 8.9 x 10^-5
d).9 x 10^-4

Question 7. Write 3.1 x 10^5 in standard form

a) 310000
b) 31000
c) 3100
d) 310

Question 8. Write 0.00012 in scientific notation
a) 1.2 x 10^-4
b) 1.2 x 10^-3
c) 1.2 x 10^-5
d) 1.2 x 10^-6

Question 9. Write 6.7 x 10^6 in standard form
a) 670000
b) 6700000
c) 67000
d) 6700

Question 10. Write 0.00078 in scientific notation
a) 7.8 x 10^-4
b) 7.8 x 10^-3
c) 7.8 x 10^-5
d) 7.8 x 10^-6

Answer Key:

1. a) 5600
2. a) 4.5 x 10^-5
3. c) 72000
4. a) 6.7 x 10^-4
5. a) 890
6. d) 8.9 x 10^-4
7. a) 310000
8. a) 1.2 x 10^-4
9. b) 6700000
10. a) 7.8 x 10^-4

Week 7 Quiz

Question 1. Which of the following represents a proportional relationship?
a) y = 2x + 3
b) y = 3x
c) y = 0.5x
d) y = 5 - x

Question 2. What is the constant of proportionality in the equation y = 4x?
a) 2
b) 4
c) 1
d) 0

Question 3. If y is directly proportional to x, and y = 15 when x = 5, what is the value of y when x = 10?
a) 20
b) 30
c) 40
d) 50

Question 4. If y varies directly as x, and y = 12 when x = 4, what is the equation that describes this relationship?
a) y = 3x
b) y = 2x
c) y = x + 8
d) y = 4x

Question 5. What does it mean for two quantities to be directly proportional?
a) They increase and decrease at the same rate.
b) When one increases, the other decreases.
c) They are equal to each other.
d) They have no relationship.

Question 6. If y is directly proportional to x, and y = 20 when x = 5, what is the value of y when x = 15?
a) 60
b) 70
c) 80
d) 90

Question 7. If y varies directly as x, and y = 16 when x = 4, what is the equation that describes this relationship?
a) y = 4x
b) y = 3x
c) y = x + 12
d) y = 2x

Question 8. What is the constant of proportionality in the equation y = 5x?
a) 5
b) 1
c) 2
d) 0

Question 9. If y is directly proportional to x, and y = 25 when x = 5, what is the value of y when x = 20?
a) 80
b) 90
c) 100
d) 110

Question 10. If y varies directly as x, and y = 18 when x = 6, what is the equation that describes this relationship?
a) y = 3x
b) y = 2x
c) y = x + 12
d) y = 4x

Answer Key

1. b) y = 3x
2. b) 4
3. b) 30
4. a) y = 3x
5. a) They increase and decrease at the same rate.
6. a) 60
7. a) y = 4x
8. a) 5
9. c) 100
10. a) y = 3x

Week 8 Quiz

Question 1. What does the slope of a line represent?
a) The vertical change for each unit of horizontal change
b) The horizontal change for each unit of vertical change
c) The ratio of the vertical change to the horizontal change
d) The ratio of the horizontal change to the vertical change

Question 2. If two triangles are similar, what can be said about their corresponding sides?
a) They are equal in length
b) They are proportional in length
c) They are perpendicular to each other
d) They are parallel to each other

Question 3. What is the slope of a line that is parallel to the line y = 3x + 2?
a) 2
b) 3
c) -3
d) -2

Question 4. If two triangles are similar, what can be said about their corresponding angles?
a) They are equal in measure
b) They are proportional in measure
c) They are perpendicular to each other
d) They are parallel to each other

Question 5. What is the slope of a line that is perpendicular to the line y = -4x + 1?
a) -4
b) 4

c) 1/4
d) -1/4

Question 6. If two triangles are similar, what can be said about the ratio of their perimeters?
a) The ratio is equal to the ratio of their corresponding sides
b) The ratio is equal to the ratio of their corresponding angles
c) The ratio is equal to the ratio of their areas
d) The ratio is equal to the ratio of their heights

Question 7. What is the slope of a line that passes through the points (2, 3) and (4, 7)?
a) 1
b) 2
c) 3
d) 4

Question 8. If two triangles are similar, what can be said about the ratio of their areas?
a) The ratio is equal to the square of the ratio of their corresponding sides
b) The ratio is equal to the ratio of their corresponding angles
c) The ratio is equal to the ratio of their perimeters
d) The ratio is equal to the ratio of their heights

Question 9. What is the slope of a line that passes through the points (-1, 2) and (3, -4)?
a) -1.5
b) -2
c) 1
d) 2

Question 10. If two triangles are similar, what can be said about the ratio of their heights?
a) The ratio is equal to the ratio of their corresponding sides
b) The ratio is equal to the ratio of their corresponding angles
c) The ratio is equal to the ratio of their perimeters
d) The ratio is equal to the ratio of their areas

Answer Key:

1. c) The ratio of the vertical change to the horizontal change
2. b) They are proportional in length
3. b) 3
4. a) They are equal in measure
5. c) 1/4
6. a) The ratio is equal to the ratio of their corresponding sides
7. b) 2
8. a) The ratio is equal to the square of the ratio of their corresponding sides
9. a) -1.5
10. a) The ratio is equal to the ratio of their corresponding sides

Week 9 Quiz

Question 1. Which of the following is a linear equation in one variable?

a) 2x^2 + 3 = 5
b) 3x + 4 = 7
c) 3x + 2y = 8
d) 4x^2 - 2 = 0

Question 2. What is the coefficient of x in the equation 3x + 2 = 5?
a) 2
b) 3
c) 5
d) 0

Question 3. In the equation 4x - 3 = 7, what does the 4 represent?
a) The variable
b) The solution
c) The constant
d) The coefficient

Question 4. What is the constant in the equation 2x + 5 = 8?
a) 2
b) 5
c) 4
d) x

Question 5. What is the first step to solve the equation 3x + 2 = 11?
a) Add 2 to both sides
b) Subtract 2 from both sides
c) Multiply both sides by 3
d) Divide both sides by 3

Question 6. What does the solution of a linear equation represent?
a) The value of the variable that makes the equation true
b) The coefficient of the variable
c) The constant in the equation
d) The variable in the equation

Question 7. What is the solution to the equation x + x = 2?
a) x = 1
b) x = 2
c) x = 3
d) x = 4

Question 8. What is the solution to the equation 5(x + 2) = 25?
a) x = 3
b) x = 4
c) x = 5
d) x = 1

Question 9. What is the solution to the equation 4x - 7 = 5?
a) x = 2

b) x = 4
c) x = 3
d) x = 1

Question 10. What is the solution to the equation 3x + 5 = 14?
a) x = 3
b) x = 2
c) x = 1
d) x = 4

Answer Key:

1. b) 3x + 4 = 7
2. b) 3
3. d) The coefficient
4. b) 5
5. b) Subtract 2 from both sides
6. a) The value of the variable that makes the equation true
7. a) x = 1
8. a) x=3
9. c) x=3
10. a) x=3

Week 10 Quiz

Question 1. What is the first step to solve the equation 3x + 2 = 11?
a) Add 2 to both sides
b) Subtract 2 from both sides
c) Multiply both sides by 3
d) Divide both sides by 3

Question 2. What is the first step to solve the equation 2x - 5 = 7?
a) Add 5 to both sides
b) Subtract 5 from both sides
c) Multiply both sides by 2
d) Divide both sides by 2

Question 3. What is the first step to solve the equation 4x / 2 = 8?
a) Multiply both sides by 2
b) Divide both sides by 2
c) Add 2 to both sides
d) Subtract 2 from both sides

Question 4. What is the first step to solve the equation 5x = 15?
a) Add 5 to both sides
b) Subtract 5 from both sides
c) Multiply both sides by 5
d) Divide both sides by 5

Question 5. What is the first step to solve the equation x / 3 = 4?
a) Multiply both sides by 3
b) Divide both sides by 3
c) Add 3 to both sides
d) Subtract 3 from both sides

Question 6. What is the first step to solve the equation 2x + 3 = 7?
a) Subtract 3 from both sides
b) Add 3 to both sides
c) Multiply both sides by 2
d) Divide both sides by 2

Question 7. What is the first step to solve the equation 3x - 2 = 10?
a) Add 2 to both sides
b) Subtract 2 from both sides
c) Multiply both sides by 3
d) Divide both sides by 3

Question 8. What is the first step to solve the equation 4x / 2 = 8?
a) Multiply both sides by 2
b) Divide both sides by 2
c) Add 2 to both sides
d) Subtract 2 from both sides

Question 9. What is the first step to solve the equation 8x = 32?
a) Add 8 to both sides
b) Subtract 8 from both sides
c) Multiply both sides by 8
d) Divide both sides by 8

Question 10. What is the first step to solve the equation x / 3 = 4?
a) Multiply both sides by 3
b) Divide both sides by 3
c) Add 3 to both sides
d) Subtract 3 from both sides

Answer Key:

1. b) Subtract 2 from both sides
2. a) Add 5 to both sides
3. a) Multiply both sides by 2
4. d) Divide both sides by 5
5. a) Multiply both sides by 3
6. a) Subtract 3 from both sides
7. a) Add 2 to both sides
8. a) Multiply both sides by 2
9. d) Divide both sides by 8
10. a) Multiply both sides by 3

<u>Week 11</u>

Question 1. Solve x + 4 = 5 + 2x
a) x = -1
b) x = 1
c) x = 0
d) x = 2

Question 2. Solve 2x + 3 = 8 + x
a) x = 5
b) x = 3
c) x = 2
d) x = 1

Question 3. Solve x - 5 = 3x + 2
a) x = -3.5
b) x = 3.5
c) x = 2.5
d) x = -2.5

Question 4. Solve 3x + 2 = 2 + 4x
a) x = -1
b) x = 1
c) x = 0
d) x = 2

Question 5. Solve 5x - 3 = 2x + 6
a) x = 3
b) x = 2
c) x = 1
d) x = 4

Question 6. Solve x + 7 = 4 + 3x
a) x = 1.5
b) x = 2.5
c) x = 3.5
d) x = 0.5

Question 7. Solve 4x - 2 = x + 5
a) x = 2.33
b) x = 1.33
c) x = 3.33
d) x = 0.33

Question 8. Solve 2x + 5 = 7x - 3
a) x = 3.6
b) x = 2.6
c) x = 0.6
d) x = 1.6

Question 9. Solve 2x + 8 = 6 + x
a) x = -2
b) x = 1
c) x = -1
d) x = 2

Question 10. Solve 3x + 9 = 6x - 3
a) x = 4
b) x = 3
c) x = 2
d) x = 5

Answer Key:

1. b) x = 1
2. a) x = 5
3. a) x = -3.5
4. c) x = 0
5. a) x = 3
6. a) x = 1.5
7. a) x = 2.33
8. d) x = 1.6
9. a) x = -2
10. a) x = 4

Week 12 Quiz

Question 1. Which of the following is a system of equations?
a) y = 2x + 3
b) x + y = 7
c) y = 2x + 3 and x + y = 7
d) x = 5

Question 2. How many solutions can a system of linear equations have?
a) 0
b) 1
c) 2
d) 0, 1, or infinitely many

Question 3. If the graphs of two linear equations are parallel lines, how many solutions does the system have?
a) 0
b) 1
c) 2
d) Infinitely many

Question 4. If the graphs of two linear equations coincide, how many solutions does the system have?

a) 0
b) 1
c) 2
d) Infinitely many

Question 5. Which method involves eliminating one variable by adding or subtracting the equations in a system?
a) Substitution method
b) Graphical method
c) Elimination method
d) Matrix method

Question 6. Which system of equations has no solution?
a) Consistent and dependent
b) Consistent and independent
c) Inconsistent
d) None of the above

Question 7. Which method involves solving one equation for one variable in terms of the other variable?
a) Substitution method
b) Graphical method
c) Elimination method
d) Matrix method

Question 8. In a system of equations, if the ratio of the coefficients of x and y in both equations is the same, the lines will be:
a) Parallel
b) Perpendicular
c) Coincident
d) Intersecting at a right angle

Question 9. A system of equations that has infinitely many solutions is:
a) Consistent and dependent
b) Consistent and independent
c) Inconsistent
d) None of the above

Question 10. Which of the following is not a method to solve a system of equations?
a) Substitution
b) Elimination
c) Multiplication
d) Graphical

Answer Key:

1. c) $y = 2x + 3$ and $x + y = 7$
2. d) 0, 1, or infinitely many
3. a) 0

4. d) Infinitely many
5. c) Elimination method
6. c) Inconsistent
7. a) Substitution method
8. a) Parallel
9. a) Consistent and dependent
10. c) Multiplication

Week 13 Quiz

Question 1. Which of the following represents a system of equations with no solution?
a) Two intersecting lines
b) Two coincident lines
c) Two parallel lines
d) Two perpendicular lines

Question 2. What does it mean for a system of equations to be consistent?
a) It has no solution
b) It has at least one solution
c) The lines are parallel
d) The lines are perpendicular

Question 3. If a system of equations has a unique solution, the system is:
a) Dependent
b) Independent
c) Inconsistent
d) None of the above

Question 4. Which of the following is true about the system of equations represented by two coincident lines?
a) It has a unique solution
b) It has no solution
c) It has infinitely many solutions
d) It cannot be determined

Question 5. A system of equations where the lines are neither parallel nor coincident will have:
a) No solution
b) One solution
c) Infinitely many solutions
d) Two solutions

Question 6. Which of the following systems is inconsistent?
a) A system with one solution
b) A system with infinitely many solutions
c) A system with no solution
d) A system with two solutions

Question 7. In a system of equations, if the two equations represent the same line, the system is:
a) Consistent and dependent
b) Consistent and independent
c) Inconsistent and dependent
d) Inconsistent and independent

Question 8. Which method involves plotting the equations on a graph to find the point of intersection?
a) Substitution method
b) Elimination method
c) Graphical method
d) Matrix method

Question 9. If the coefficients of x and y are proportional in a system of equations, but the constants are not, the system is:
a) Consistent and dependent
b) Consistent and independent
c) Inconsistent
d) None of the above

Question 10. Which of the following is true for a system of equations that represents two different lines with the same slope?
a) The system has one solution
b) The system has no solution
c) The system has two solutions
d) The system has infinitely many solutions

Answer Key:

1. c) Two parallel lines
2. b) It has at least one solution
3. b) Independent
4. c) It has infinitely many solutions
5. b) One solution
6. c) A system with no solution
7. a) Consistent and dependent
8. c) Graphical method
9. c) Inconsistent
10. b) The system has no solution

Week 14 Quiz

Question 1. When graphing two linear equations, if the lines intersect at a single point, how many solutions does the system have?
a) No solutions
b) Infinitely many solutions
c) One solution
d) Two solutions

Question 2. What does it mean for a system of equations to be inconsistent when graphing?
a) The lines are coincident
b) The lines are perpendicular
c) The lines are parallel
d) The lines intersect at a single point

Question 3. Which of the following best describes the graphical representation of a dependent system?
a) Two parallel lines
b) Two intersecting lines
c) Two lines that coincide
d) Two lines that are perpendicular

Question 4. If two lines have the same slope but different y-intercepts, when graphed they will:
a) Intersect at a single point
b) Be coincident
c) Be parallel and never intersect
d) Intersect at two points

Question 5. When graphing a system of equations, if the lines are coincident, the system is:
a) Inconsistent
b) Consistent and dependent
c) Consistent and independent
d) Neither consistent nor inconsistent

Question 6. The point where two lines intersect on a graph represents:
a) The solution to the system
b) The x-intercept of the system
c) The y-intercept of the system
d) The slope of the system

Question 7. If the graph of a system of equations results in two lines that never meet, the system has:
a) One solution
b) No solution
c) Infinitely many solutions
d) Two solutions

Question 8. When using a graph to solve a system of equations, what is the importance of the point of intersection?
a) It determines the slope of the lines
b) It gives the solution to the system
c) It indicates the y-intercept of the graph
d) It shows the x-intercept of the graph

Question 9. In a graph, if two lines have different slopes, they will:
a) Never intersect

b) Intersect at a single point
c) Be coincident
d) Be parallel

Question 10. When graphing a system of equations, if the lines are parallel, the system is:
a) Consistent and dependent
b) Consistent and independent
c) Inconsistent
d) Neither consistent nor inconsistent

Answer Key:

1. c) One solution
2. c) The lines are parallel
3. c) Two lines that coincide
4. c) Be parallel and never intersect
5. b) Consistent and dependent
6. a) The solution to the system
7. b) No solution
8. b) It gives the solution to the system
9. b) Intersect at a single point
10. c) Inconsistent

Week 15 Quiz

Question 1. When using the substitution method, what do you solve one of the equations for?
a) x
b) y
c) Either x or y
d) Neither x nor y

Question 2. What is the main goal of the substitution method?
a) To eliminate one variable
b) To add the two equations together
c) To multiply the equations
d) To subtract one equation from the other

Question 3. If you have the equation y=2x+3, which variable is expressed in terms of the other?
a) x in terms of y
b) y in terms of x
c) Neither
d) Both

Question 4. After substituting the expression from one equation into the other, what should you end up with?
a) An equation with two variables
b) An equation with one variable

c) Two separate equations
d) A graph

Question 5. Why is it sometimes beneficial to use the substitution method over the elimination method?
a) It's always faster
b) One of the equations is already solved for one variable
c) It requires less algebraic manipulation
d) It's easier to graph

Question 6. What do you do after finding the value of one variable using substitution?
a) Stop because you're done
b) Substitute that value into one of the original equations to find the other variable
c) Graph the solution
d) Eliminate the variable from the other equation

Question 7. In which scenario is the substitution method most straightforward?
a) When coefficients are large numbers
b) When one equation is quadratic
c) When one variable is already isolated
d) When the system is inconsistent

Question 8. If a system of equations has no solution, what does that mean about the lines represented by the equations?
a) They intersect at one point
b) They are the same line
c) They are parallel
d) They intersect at multiple points

Question 9. What is the graphical interpretation of a system of equations that has infinitely many solutions?
a) Two intersecting lines
b) Two parallel lines
c) Two lines that coincide (are on top of each other)
d) Two perpendicular lines

Question 10. If you use the substitution method and end up with a statement like $5 = 5$, what does that indicate about the system of equations?
a) The system has one unique solution
b) The system has no solution
c) The system has infinitely many solutions
d) The equations are not related

Answer Key:

1. c) Either x or y
2. a) To eliminate one variable
3. b) y in terms of x
4. b) An equation with one variable

5. b) One of the equations is already solved for one variable
6. b) Substitute that value into one of the original equations to find the other variable
7. c) When one variable is already isolated
8. c) They are parallel
9. c) Two lines that coincide (are on top of each other)
10. c) The system has infinitely many solutions

Week 16

Question 1. A function is defined as:
a) A relation where each input has exactly one output.
b) A mathematical expression with multiple variables.
c) A type of equation.
d) A graph with a straight line.

Question 2. The set of all possible input values for a function is called the:
a) Range
b) Domain
c) Output
d) Coordinate

Question 3. The set of all possible output values for a function is known as the:
a) Coordinate
b) Domain
c) Range
d) Variable

Question 4. If every vertical line intersects a graph at most once, the graph represents:
a) A circle
b) A function
c) A parabola
d) A hyperbola

Question 5. In the notation f(x), "f" represents:
a) The output value
b) The input value
c) The name of the function
d) The slope of the function

Question 6. A function that pairs each element of the domain with exactly one element of the range is:
a) One-to-many
b) Many-to-one
c) One-to-one
d) None of the above

Question 7. A function can be represented by:
a) A table
b) A set of ordered pairs

c) A graph
d) All of the above

Question 8. The vertical line test is used to determine:
a) If a graph represents a function.
b) The slope of a function.
c) The y-intercept of a function.
d) The x-intercept of a function.

Question 9. A function that does not pass the vertical line test is:
a) Still considered a function.
b) Not a function.
c) A linear function.
d) A quadratic function.

Question 10. In a function, the input value is often referred to as:
a) y
b) f
c) x
d) m

Answer Key:

1. a) A relation where each input has exactly one output.
2. b) Domain
3. c) Range
4. b) A function
5. c) The name of the function
6. c) One-to-one
7. d) All of the above
8. a) If a graph represents a function.
9. b) Not a function.
10. c) x

Week 17

Question 1. The average rate of a function measures:
a) How fast the function is increasing or decreasing.
b) The highest point of the function.
c) The slope of the function.
d) The y-intercept of the function.

Question 2. To find the average rate of a function over an interval, you need:
a) The beginning and end values of the interval.
b) The highest and lowest values of the function.
c) The x-intercepts of the function.
d) The y-intercept of the function.

Question 3. The average rate of change is similar to:

a) The area under the curve.
b) The y-intercept.
c) The slope of a secant line.
d) The x-intercept.

Question 4. If a function's average rate of change over an interval is positive, it means:
a) The function is decreasing.
b) The function is constant.
c) The function is increasing.
d) The function has no change.

Question 5. The average rate of change can be found by:
a) Dividing the change in output by the change in input.
b) Multiplying the output by the input.
c) Adding the output to the input.
d) Subtracting the output from the input.

Question 6. If the average rate of change is zero, the function is:
a) Increasing rapidly.
b) Decreasing rapidly.
c) Constant over the interval.
d) Undefined over the interval.

Question 7. The units of the average rate of change are:
a) The same as the input.
b) The same as the output.
c) A combination of the input and output units.
d) Always in meters per second.

Question 8. The average rate of change gives us:
a) The exact speed at a single point.
b) The overall change over an interval.
c) The maximum value of the function.
d) The minimum value of the function.

Question 9. A larger average rate of change indicates:
a) A steeper function.
b) A flatter function.
c) A function with no slope.
d) A function with a negative slope.

Question 10. The average rate of change can be used to:
a) Predict future behavior of the function.
b) Find the exact value of the function at a point.
c) Determine the type of function.
d) Find the x-intercept of the function.

Answer Key:

1. a) How fast the function is increasing or decreasing.
2. a) The beginning and end values of the interval.
3. c) The slope of a secant line.
4. c) The function is increasing.
5. a) Dividing the change in output by the change in input.
6. c) Constant over the interval.
7. c) A combination of the input and output units.
8. b) The overall change over an interval.
9. a) A steeper function.
10. a) Predict future behavior of the function.

Week 18

Question 1. In the equation $y = mx + b$, what does the 'm' represent?
a) The y-intercept
b) The x-intercept
c) The slope of the line
d) The height of the line

Question 2. In the equation $y = mx + b$, what does the 'b' stand for?
a) The slope of the line
b) The x-coordinate of the line
c) The y-coordinate of the line
d) The y-intercept of the line

Question 3. If the value of 'm' is positive in $y = mx + b$, the line will:
a) Slope downwards from left to right
b) Slope upwards from left to right
c) Be horizontal
d) Be vertical

Question 4. If the value of 'm' is 0 in $y = mx + b$, the line is:
a) Vertical
b) Diagonal
c) Horizontal
d) Curved

Question 5. The equation $y = mx + b$ is a representation of:
a) A quadratic function
b) A linear function
c) A cubic function
d) An exponential function

Question 6. If the value of 'b' is positive in $y = mx + b$, the line will:
a) Cross the y-axis above the origin
b) Cross the y-axis below the origin
c) Cross the x-axis to the right of the origin
d) Cross the x-axis to the left of the origin

Question 7. The slope 'm' in y = mx + b can be found by:
a) Rise divided by run
b) Run divided by rise
c) Rise plus run
d) Rise minus run

Question 8. A line that is parallel to the x-axis will have a slope of:
a) 1
b) 0
c) -1
d) Undefined

Question 9. In the equation y = mx + b, if 'm' is negative and 'b' is positive, the line will:
a) Start in the first quadrant and slope upwards
b) Start in the first quadrant and slope downwards
c) Start in the third quadrant and slope upwards
d) Start in the fourth quadrant and slope downwards

Question 10. The point where the line y = mx + b crosses the y-axis is called:
a) The slope
b) The x-intercept
c) The origin
d) The y-intercept

Answer Key:

1. c) The slope of the line
2. d) The y-intercept of the line
3. b) Slope upwards from left to right
4. c) Horizontal
5. b) A linear function
6. a) Cross the y-axis above the origin
7. a) Rise divided by run
8. b) 0
9. b) Start in the first quadrant and slope downwards
10. d) The y-intercept

Week 19

Question 1. If f(3) = 5 and f(5) = 9, what can be inferred about the function?
a) It is decreasing.
b) It is increasing.
c) It is constant.
d) It is quadratic.

Question 2. Given f(2) = 4 and f(4) = 8, which statement is true?
a) The function has a slope of 1.
b) The function has a slope of 2.
c) The function has a y-intercept of 2.

d) The function has a y-intercept of 0.

Question 3. If f(a) = b and f(c) = d, what does 'a' represent?
a) The output of the function
b) The slope of the function
c) The y-intercept of the function
d) The input of the function

Question 4. In function notation, which value represents the output?
a) The value inside the parentheses
b) The value after the equal sign
c) The letter 'f'
d) The letter 'x'

Question 5. If f(0) = 7, what does this tell you about the graph of the function?
a) The slope is 7.
b) The x-intercept is 7.
c) The y-intercept is 7.
d) The function is undefined at 7.

Question 6. Given f(1) = 3 and f(3) = 7, how can you determine the slope of the function?
a) Subtract the x-values.
b) Subtract the y-values.
c) Divide the difference in y-values by the difference in x-values.
d) Multiply the x-values.

Question 7. If f(x) represents a linear function, how many outputs will each input have?
a) Zero
b) One
c) Two
d) Infinite

Question 8. What does the value of f(4) represent on a graph?
a) The x-coordinate when y is 4
b) The y-coordinate when x is 4
c) The slope of the line
d) The y-intercept of the line

Question 9. If f(5) = 10 and f(7) = 14, what can be said about the function?
a) It rises by 2 units for every 1 unit run.
b) It rises by 4 units for every 2 units run.
c) It has a constant rate of change.
d) It is a quadratic function.

Question 10. In the context of linear functions, what does the term "rate of change" refer to?
a) The y-intercept
b) The x-intercept
c) The slope
d) The function's maximum value

Answer Key:

1. b) It is increasing.
2. b) The function has a slope of 2.
3. d) The input of the function
4. b) The value after the equal sign
5. c) The y-intercept is 7.
6. c) Divide the difference in y-values by the difference in x-values.
7. b) One
8. b) The y-coordinate when x is 4
9. c) It has a constant rate of change.
10. c) The slope

Week 20

Question 1. Which of the following best describes a function?
a) A relation where each input has more than one output
b) A relation where each input has exactly one output
c) A graph that is a straight line
d) A graph that is a curve

Question 2. What is the name of the point where a graph crosses the x-axis?
a) Y-intercept
b) Origin
c) X-intercept
d) Vertex

Question 3. If a graph represents a function, it will pass which test?
a) Horizontal line test
b) Diagonal line test
c) Vertical line test
d) Curved line test

Question 4. Which term describes a function that has a graph that is a straight line?
a) Quadratic
b) Exponential
c) Linear
d) Circular

Question 5. What is the name of the point where a graph is at its highest or lowest?
a) X-intercept
b) Y-intercept
c) Origin
d) Vertex

Question 6. If two variables increase together in a graph, they have a:
a) Negative correlation
b) Positive correlation

c) No correlation
d) Zero correlation

Question 7. Which of the following is NOT a type of relation?
a) Linear
b) Quadratic
c) Circular
d) Diagonal

Question 8. A graph that shows a relation where some inputs have more than one output is:
a) A function
b) Not a function
c) A linear relation
d) A quadratic relation

Question 9. The set of all output values of a function is called its:
a) Domain
b) Range
c) X-values
d) Y-values

Question 10. Which of the following best describes the graph of a relation that is not a function?
a) It passes the vertical line test
b) It fails the vertical line test
c) It is always a straight line
d) It is always a curve

Answer Key:

1. b) A relation where each input has exactly one output
2. c) X-intercept
3. c) Vertical line test
4. c) Linear
5. d) Vertex
6. b) Positive correlation
7. d) Diagonal
8. b) Not a function
9. b) Range
10. b) It fails the vertical line test

Week 21

Question 1. A rotation is a transformation that:
a) Slides a figure
b) Flips a figure
c) Turns a figure around a point
d) Enlarges or reduces a figure

Question 2. The point around which a figure is rotated is called the:
a) Reference point
b) Midpoint
c) Origin
d) Center of rotation

Question 3. When a figure is rotated 90 degrees counterclockwise about the origin, the point (x, y) becomes:
a) (y, x)
b) (-y, x)
c) (y, -x)
d) (-x, y)

Question 4. A 180-degree rotation about the origin will make the point (x, y) become:
a) (x, y)
b) (-x, -y)
c) (y, x)
d) (-y, -x)

Question 5. A rotation of 360 degrees about a point will:
a) Leave the figure unchanged
b) Flip the figure
c) Turn the figure upside down
d) Slide the figure

Question 6. The center of rotation can be:
a) Only inside the figure
b) Only outside the figure
c) Anywhere on the coordinate grid
d) Only on the x-axis

Question 7. A rotation is an example of:
a) A non-rigid transformation
b) A dilation
c) A rigid transformation
d) A reflection

Question 8. If a figure is rotated 270 degrees counterclockwise about the origin, it is the same as rotating it how many degrees clockwise?
a) 90 degrees
b) 180 degrees
c) 270 degrees
d) 360 degrees

Question 9. Rotations preserve:
a) Only angles
b) Only side lengths
c) Both angles and side lengths
d) Neither angles nor side lengths

Question 10. If a figure is rotated about a point not at the origin, the relationship between the original and image points is that they:
a) Lie on the same line segment
b) Are mirror images of each other
c) Have the same x-coordinate
d) Have the same y-coordinate

Answer Key:

1. c) Turns a figure around a point
2. d) Center of rotation
3. b) (-y, x)
4. b) (-x, -y)
5. a) Leave the figure unchanged
6. c) Anywhere on the coordinate grid
7. c) A rigid transformation
8. a) 90 degrees
9. c) Both angles and side lengths
10. a) Lie on the same line segment

Week 22

Question 1. When two lines intersect, they form:
a) One angle
b) Two angles
c) Three angles
d) Four angles

Question 2. Angles that are opposite each other when two lines intersect are called:
a) Adjacent angles
b) Complementary angles
c) Supplementary angles
d) Vertical angles

Question 3. Vertical angles are always:
a) Adjacent
b) Complementary
c) Equal in measure
d) Supplementary

Question 4. If two lines are perpendicular, they form angles that are:
a) Acute
b) Obtuse
c) Right
d) Straight

Question 5. The sum of the angles formed by two intersecting lines is:
a) 90 degrees

b) 180 degrees
c) 270 degrees
d) 360 degrees

Question 6. Two angles that add up to 90 degrees are called:
a) Adjacent angles
b) Complementary angles
c) Supplementary angles
d) Vertical angles

Question 7. Two angles that add up to 180 degrees are called:
a) Adjacent angles
b) Complementary angles
c) Supplementary angles
d) Vertical angles

Question 8. If two angles are supplementary and one of them measures 110 degrees, the other angle measures:
a) 50 degrees
b) 60 degrees
c) 70 degrees
d) 80 degrees

Question 9. Angles that share a common side and vertex are called:
a) Adjacent angles
b) Complementary angles
c) Supplementary angles
d) Vertical angles

Question 10. If two parallel lines are cut by a transversal, the angles that are above and below the transversal and on the same side of it are called:
a) Alternate interior angles
b) Alternate exterior angles
c) Corresponding angles
d) Vertical angles

Answer Key:

1. d) Four angles
2. d) Vertical angles
3. c) Equal in measure
4. c) Right
5. d) 360 degrees
6. b) Complementary angles
7. c) Supplementary angles
8. c) 70 degrees
9. a) Adjacent angles
10. c) Corresponding angles

Week 23

Question 1. Which of the following best describes an acute angle?
a) Less than 90 degrees
b) Exactly 90 degrees
c) More than 90 degrees but less than 180 degrees
d) Exactly 180 degrees

Question 2. A straight angle measures:
a) 45 degrees
b) 90 degrees
c) 135 degrees
d) 180 degrees

Question 3. Which type of angle is formed when the hands of a clock point to 3 and 9?
a) Acute
b) Right
c) Obtuse
d) Straight

Question 4. Two angles that share a common side but do not overlap are called:
a) Vertical angles
b) Complementary angles
c) Supplementary angles
d) Adjacent angles

Question 5. Which of the following angles is larger than a right angle but smaller than a straight angle?
a) Acute angle
b) Right angle
c) Obtuse angle
d) Reflex angle

Question 6. How many degrees are there in a full circle?
a) 90 degrees
b) 180 degrees
c) 270 degrees
d) 360 degrees

Question 7. If one angle measures 40 degrees, its complementary angle measures:
a) 40 degrees
b) 50 degrees
c) 140 degrees
d) 150 degrees

Question 8. An angle that measures more than 180 degrees but less than 360 degrees is called:
a) Acute angle

b) Right angle
c) Obtuse angle
d) Reflex angle

Question 9. Which of the following pairs of angles always sum up to 180 degrees?
a) Complementary angles
b) Supplementary angles
c) Vertical angles
d) Adjacent angles

Question 10. In the term "right angle", the word "right" means:
a) Correct
b) Opposite of left
c) Perpendicular
d) Straight

Answer Key:

1. a) Less than 90 degrees
2. d) 180 degrees
3. d) Straight
4. d) Adjacent angles
5. c) Obtuse angle
6. d) 360 degrees
7. b) 50 degrees
8. d) Reflex angle
9. b) Supplementary angles
10. c) Perpendicular

Week 24

Question 1. What is the best approach to find the area of an L-shaped polygon?
a) Add the areas of the two rectangles that make up the L-shape.
b) Subtract the area of the smaller rectangle from the larger rectangle.
c) Multiply the lengths of the two sides of the L-shape.
d) Divide the L-shape into triangles and find their areas.

Question 2. An L-shaped polygon can be divided into:
a) Two triangles
b) Two rectangles
c) One triangle and one rectangle
d) Three rectangles

Question 3. To find the area of a rectangle, you should:
a) Add the lengths of all sides
b) Multiply the length by the width
c) Multiply the length by itself
d) Add the length and width and then square the result

Question 4. If one rectangle in an L-shaped polygon has a larger area than the other, the overall area of the L-shape is:
a) The sum of the areas of both rectangles
b) The difference between the areas of both rectangles
c) The product of the areas of both rectangles
d) The quotient of the areas of both rectangles

Question 5. Which of the following shapes can be combined to form an L-shaped polygon?
a) Two circles
b) One circle and one rectangle
c) Two rectangles
d) One triangle and one circle

Question 6. The area of an L-shaped polygon is measured in:
a) Square units
b) Linear units
c) Cubic units
d) Degrees

Question 7. If you know the area of one rectangle in an L-shaped polygon but not the other, you:
a) Cannot determine the total area of the L-shape
b) Can determine the total area by subtracting the known area from the total area
c) Can determine the total area by adding the known area to itself
d) Can determine the total area by dividing the known area by 2

Question 8. An L-shaped polygon is also known as:
a) A compound shape
b) A simple shape
c) A circular shape
d) A triangular shape

Question 9. If the two rectangles forming an L-shaped polygon have the same area, the total area of the L-shape is:
a) The area of one rectangle
b) Twice the area of one rectangle
c) Half the area of one rectangle
d) Three times the area of one rectangle

Question 10. To find the area of an L-shaped polygon, it's important to:
a) Only consider the longer sides of the rectangles
b) Only consider the shorter sides of the rectangles
c) Consider all sides of the rectangles
d) Ignore the sides and focus on the angles

Answer Key:

1. a) Add the areas of the two rectangles that make up the L-shape.
2. b) Two rectangles

3. b) Multiply the length by the width
4. a) The sum of the areas of both rectangles
5. c) Two rectangles
6. a) Square units
7. a) Cannot determine the total area of the L-shape
8. a) A compound shape
9. b) Twice the area of one rectangle
10. c) Consider all sides of the rectangles

Week 25

Question 1. Which of the following is defined as a location in space that has no size?
a) Line
b) Plane
c) Point
d) Segment

Question 2. If points A, B, and C lie on the same line, they are said to be:
a) Coplanar
b) Collinear
c) Intersecting
d) Parallel

Question 3. How many points are needed to define a line?
a) One
b) Two
c) Three
d) Four

Question 4. Points that lie in the same plane are called:
a) Collinear
b) Coplanar
c) Non-collinear
d) Non-coplanar

Question 5. Which of the following extends in two opposite directions without end?
a) Ray
b) Segment
c) Point
d) Line

Question 6. How many planes can be drawn through three non-collinear points?
a) One
b) Two
c) Three
d) Infinite

Question 7. If two lines in a plane never meet, they are:
a) Intersecting

b) Collinear
c) Coplanar
d) Parallel

Question 8. A flat surface that extends without end in all directions is called a:
a) Line
b) Point
c) Plane
d) Ray

Question 9. How many points are needed to define a plane?
a) One
b) Two
c) Three
d) Four

Question 10. If two lines intersect, they intersect at a:
a) Line
b) Plane
c) Point
d) Ray

Answer Key:

1. c) Point
2. b) Collinear
3. b) Two
4. b) Coplanar
5. d) Line
6. a) One
7. d) Parallel
8. c) Plane
9. c) Three
10. c) Point

Week 26

Question 1. What does it mean for two triangles to be congruent?
a) They have the same area.
b) They have the same shape and size.
c) They have the same perimeter.
d) They look similar.

Question 2. The SSS criterion states that if three sides of one triangle are equal to three sides of another triangle, then:
a) They have the same area.
b) They are similar.
c) They are congruent.
d) They have the same perimeter.

Question 3. If two triangles have three sides of the same length, then:
a) They are always congruent.
b) They are always similar.
c) They have the same height.
d) They have the same base.

Question 4. Which of the following is NOT enough to prove that two triangles are congruent?
a) Three sides are equal in length.
b) Two sides and the included angle are equal.
c) Three angles are equal.
d) Two angles and the included side are equal.

Question 5. Congruent triangles have corresponding sides and angles that are:
a) Approximately equal.
b) Exactly equal.
c) Proportional.
d) Complementary.

Question 6. The SSS criterion for congruence is based on which feature of a triangle?
a) Angles
b) Height
c) Sides
d) Perimeter

Question 7. If two triangles are congruent, then their corresponding angles are:
a) Acute
b) Obtuse
c) Right
d) Equal

Question 8. Which of the following can be used to prove triangle congruence besides the SSS criterion?
a) AAA
b) AAS
c) ASA
d) SSA

Question 9. If two sides of a triangle are 5 cm and 7 cm, and another triangle also has sides of 5 cm and 7 cm, are the triangles always congruent?
a) Yes
b) No
c) It depends on the third side.
d) It depends on the angles.

Question 10. In the context of triangles, what does SSS stand for?
a) Side, Side, Side
b) Side, Side, Segment

c) Side, Segment, Side
d) Segment, Segment, Segment

Answer Key:

1. b) They have the same shape and size.
2. c) They are congruent.
3. a) They are always congruent.
4. c) Three angles are equal.
5. b) Exactly equal.
6. c) Sides
7. d) Equal
8. c) ASA
9. c) It depends on the third side.
10. a) Side, Side, Side.

Week 27

Question 1. What is a dilation transformation?
a) A shift of a figure in a straight line.
b) A flip of a figure over a line.
c) A turn of a figure around a point.
d) A resize of a figure larger or smaller.

Question 2. What does the center of dilation represent?
a) The point where the figure is flipped.
b) The point where the figure is turned.
c) The point from which distances are measured.
d) The point where the figure is shifted.

Question 3. If a figure is dilated with a scale factor greater than 1, the image will be:
a) The same size as the original.
b) Smaller than the original.
c) Larger than the original.
d) Flipped compared to the original.

Question 4. A scale factor of 1 in a dilation results in:
a) No change in the figure's size.
b) The figure becoming twice as large.
c) The figure becoming half its size.
d) The figure turning 90 degrees.

Question 5. If a figure is dilated with a scale factor of 0.5, the resulting figure will be:
a) The same size.
b) Twice as large.
c) Half as large.
d) Four times larger.

Question 6. What happens to the angles of a figure after a dilation?
a) They become larger.
b) They become smaller.
c) They remain the same.
d) They are halved.

Question 7. Dilation transformations preserve:
a) Distance between points.
b) Size of the figure.
c) Shape of the figure.
d) Orientation of the figure.

Question 8. If two figures are related by a dilation, they are:
a) Congruent.
b) Similar.
c) Neither congruent nor similar.
d) Always the same size.

Question 9. The center of dilation can be:
a) Only inside the figure.
b) Only outside the figure.
c) Anywhere, either inside or outside the figure.
d) At the midpoint of the figure.

Question 10. If a figure is dilated with a scale factor less than 0, the image will be:
a) The same size but flipped.
b) Larger and flipped.
c) Smaller and flipped.
d) Neither larger nor smaller, but turned.

Answer Key:

1. d) A resize of a figure larger or smaller.
2. c) The point from which distances are measured.
3. c) Larger than the original.
4. a) No change in the figure's size.
5. c) Half as large.
6. c) They remain the same.
7. c) Shape of the figure.
8. b) Similar.
9. c) Anywhere, either inside or outside the figure.
10. a) The same size but flipped.

Week 28

Question 1. What is an exterior angle of a triangle?
a) An angle inside the triangle.
b) An angle formed by one side of the triangle and the extension of an adjacent side.
c) The angle between two sides of the triangle.

d) The angle opposite the right angle in a right triangle.

Question 2. How many exterior angles does a triangle have?
a) 1
b) 2
c) 3
d) 4

Question 3. The sum of the measures of the exterior angles of a triangle is always:
a) 90 degrees.
b) 180 degrees.
c) 270 degrees.
d) 360 degrees.

Question 4. An exterior angle of a triangle is equal to:
a) The sum of the measures of the two non-adjacent interior angles.
b) The difference between 180 degrees and the adjacent interior angle.
c) Half the measure of the adjacent interior angle.
d) The average of the measures of all three interior angles.

Question 5. If one interior angle of a triangle measures 60 degrees, what is the measure of its adjacent exterior angle?
a) 30 degrees.
b) 60 degrees.
c) 120 degrees.
d) 150 degrees.

Question 6. The exterior angles of a triangle are always:
a) Acute.
b) Obtuse.
c) Right.
d) They can be acute, right, or obtuse.

Question 7. If two interior angles of a triangle are congruent, then their corresponding exterior angles are:
a) Congruent.
b) Supplementary.
c) Complementary.
d) Neither congruent nor supplementary.

Question 8. Which of the following is true about the exterior angle of an equilateral triangle?
a) It measures 60 degrees.
b) It measures 90 degrees.
c) It measures 120 degrees.
d) It measures 180 degrees.

Question 9. If an interior angle of a triangle is 90 degrees, its adjacent exterior angle will be:
a) 0 degrees.
b) 45 degrees.

c) 90 degrees.
d) 180 degrees.

Question 10. The exterior angle theorem states that the exterior angle of a triangle is equal to:
a) The sum of the other two interior angles.
b) The difference between the other two interior angles.
c) Half the sum of the other two interior angles.
d) Twice the sum of the other two interior angles.

Answer Key:

1. b) An angle formed by one side of the triangle and the extension of an adjacent side.
2. c) 3
3. d) 360 degrees.
4. a) The sum of the measures of the two non-adjacent interior angles.
5. c) 120 degrees.
6. d) They can be acute, right, or obtuse.
7. a) Congruent.
8. c) It measures 120 degrees.
9. c) 90 degrees.
10. a) The sum of the other two interior angles.

Week 29

Question 1. The Pythagorean Theorem applies to which type of triangle?
a) Equilateral
b) Isosceles
c) Right
d) Scalene

Question 2. In the Pythagorean Theorem, which side is opposite the right angle?
a) Adjacent
b) Opposite
c) Hypotenuse
d) Base

Question 3. The Pythagorean Theorem relates:
a) All three sides of a triangle.
b) Only the two shorter sides of a triangle.
c) Only the longest side and one shorter side of a triangle.
d) The area and perimeter of a triangle.

Question 4. The Converse of the Pythagorean Theorem is used to:
a) Determine if a triangle is equilateral.
b) Determine if a triangle is right.
c) Determine the length of the hypotenuse.
d) Determine the area of a triangle.

Question 5. If the lengths of the three sides of a triangle satisfy the Pythagorean Theorem, the triangle is:
a) Equilateral
b) Isosceles
c) Right
d) Scalene

Question 6. The Pythagorean Theorem can be written as:
a) $a + b = c$
b) $a \times b = c$
c) $a^2 + b^2 = c^2$
d) $a^2 \times b^2 = c^2$

Question 7. In a right triangle, if one leg measures 3 units and the other leg measures 4 units, the hypotenuse will measure:
a) 5 units
b) 7 units
c) 9 units
d) 12 units

Question 8. The Converse of the Pythagorean Theorem states:
a) If the square of the longest side is equal to the sum of the squares of the other two sides, the triangle is right.
b) If the square of the longest side is less than the sum of the squares of the other two sides, the triangle is right.
c) If the square of the longest side is greater than the sum of the squares of the other two sides, the triangle is right.
d) All triangles satisfy the Pythagorean Theorem.

Question 9. Which set of side lengths could form a right triangle?
a) 5, 12, 13
b) 3, 4, 8
c) 6, 8, 10
d) 2, 3, 4

Question 10. The Pythagorean Theorem is named after:
a) Pythagoras, a Greek mathematician.
b) Pythagoras, a Roman scholar.
c) Pythagoras, an Egyptian pharaoh.
d) Pythagoras, a Mesopotamian scribe.

Answer Key:

1. c) Right
2. c) Hypotenuse
3. a) All three sides of a triangle.
4. b) Determine if a triangle is right.
5. c) Right
6. c) $a^2 + b^2 = c^2$

7. a) 5 units
8. a) If the square of the longest side is equal to the sum of the squares of the other two sides, the triangle is right.
9. a) 5, 12, 13
10. a) Pythagoras, a Greek mathematician.

Week 30

Question 1. The Distance Formula is used to find:
a) The area of a shape.
b) The perimeter of a shape.
c) The distance between two points on a coordinate plane.
d) The midpoint between two points.

Question 2. The Distance Formula is derived from which theorem?
a) The Pythagorean Theorem.
b) The Quadratic Formula.
c) The Binomial Theorem.
d) The Distributive Property.

Question 3. To use the Distance Formula, you need the coordinates of:
a) One point.
b) Two points.
c) Three points.
d) Four points.

Question 4. In the Distance Formula, what do you do with the x-coordinates of the two points?
a) Add them.
b) Subtract them.
c) Multiply them.
d) Divide them.

Question 5. In the Distance Formula, after finding the difference between the x-coordinates and the y-coordinates, you should:
a) Add the differences.
b) Subtract the differences.
c) Square the differences.
d) Divide the differences.

Question 6. The Distance Formula gives the distance as:
a) A negative value.
b) A positive value.
c) A value between 0 and 1.
d) A zero value.
Question 7. If two points have the same x-coordinate, the distance between them is:
a) The difference in their y-coordinates.
b) The sum of their y-coordinates.
c) Zero.

d) The product of their y-coordinates.
Question 8. The Distance Formula can be used in which plane?
a) Only in the first quadrant.
b) Only in the x-y plane.
c) In any quadrant of the coordinate plane.
d) Only in 3D space.

Question 9. If the distance between two points is zero, it means:
a) The points are very close but not the same.
b) The points are at opposite ends of the coordinate plane.
c) The two points are the same.
d) The formula was used incorrectly.

Question 10. The Distance Formula measures distance in:
a) Square units.
b) Cubic units.
c) Linear units.
d) Percentage.

Answer Key:

1. c) The distance between two points on a coordinate plane.
2. a) The Pythagorean Theorem.
3. b) Two points.
4. b) Subtract them.
5. c) Square the differences.
6. b) A positive value.
7. a) The difference in their y-coordinates.
8. c) In any quadrant of the coordinate plane.
9. c) The two points are the same.
10. c) Linear units.

Week 31

Question 1. What shape is a sphere?
a) Cube
b) Rectangle
c) Ball-shaped
d) Pyramid
Question 2. What do you need to know to find the volume of a sphere?
a) The radius
b) The height
c) The length and width
d) The area of the base
Question 3. Where is the radius of a sphere measured from?
a) From one edge to the opposite edge
b) From the center to any point on the surface
c) From one side to the other side
d) From the top to the bottom

Question 4. If you double the radius of a sphere, what happens to the volume?
a) It doubles
b) It triples
c) It quadruples
d) It increases eight times
Question 5. What is the volume of a sphere with a radius of zero?
a) Zero
b) One
c) Infinity
d) Undefined
Question 6. What part of the sphere is used to calculate the volume?
a) The surface area
b) The radius
c) The diameter
d) The circumference
Question 7. Is the formula for the volume of a sphere based on the formula for the volume of a cylinder?
a) Yes
b) No
c) Sometimes
d) Only for large spheres
Question 8. What geometric solid is obtained if you cut a sphere by a plane?
a) Circle
b) Ellipse
c) Rectangle
d) Triangle
Question 9. If you know the diameter of a sphere, can you find its volume?
a) Yes
b) No
c) Only if the diameter is even
d) Only if the diameter is odd
Question 10. Is the volume of a sphere always a positive number?
a) Yes
b) No
c) It can be zero
d) It depends on the radius

Answer Key:

1. c) Ball-shaped
2. a) The radius
3. b) From the center to any point on the surface
4. d) It increases eight times
5. a) Zero
6. b) The radius
7. a) Yes
8. a) Circle
9. a) Yes

10. a) Yes

Week 32

Question 1. What is a scatter plot?
a) A type of graph that shows the relationship between two variables
b) A plot that scatters data randomly
c) A graph that shows data in columns
d) A graph that shows data in pie slices

Question 2. What are the two axes called in a scatter plot?
a) Horizontal and vertical
b) Diagonal and straight
c) X and Y
d) Both a and c

Question 3. What does each point on a scatter plot represent?
a) A pair of values
b) A single value
c) A summary of all the data
d) The average value

Question 4. What can you use a scatter plot to find?
a) The relationship between two variables
b) The exact value of a variable
c) The total number of data points
d) The median of the data

Question 5. What kind of relationship is shown by points that rise from left to right?
a) Positive relationship
b) Negative relationship
c) No relationship
d) Complex relationship

Question 6. What kind of relationship is shown by points that fall from left to right?
a) Positive relationship
b) Negative relationship
c) No relationship
d) Complex relationship

Question 7. What do we call a line that best fits the data points in a scatter plot?
a) Line of best fit
b) Median line
c) Average line
d) Central line

Question 8. Can a scatter plot have points that do not follow any pattern?
a) Yes
b) No

c) Only if there is an error in the data
d) Only if the data is from a scientific experiment

Question 9. What should you do before plotting points on a scatter plot?
a) Collect and organize the data
b) Draw a histogram
c) Find the mean of the data
d) Find the median of the data

Question 10. Can a scatter plot have more than one cluster of points?
a) Yes
b) No
c) Only if there is a mistake in the data
d) Only if the data is from a survey

Answer Key:

1. a) A type of graph that shows the relationship between two variables
2. d) Both a and c
3. a) A pair of values
4. a) The relationship between two variables
5. a) Positive relationship
6. b) Negative relationship
7. a) Line of best fit
8. a) Yes
9. a) Collect and organize the data
10. a) Yes

Week 33

Question 1. In Excel, where do you go to insert a line chart?
a) Home tab
b) Insert tab
c) View tab
d) Data tab

Question 2. What should you do first before creating a line chart?
a) Save the file
b) Input the data in cells
c) Insert a chart title
d) Choose a chart style

Question 3. What is the vertical axis on a line chart commonly referred to as?
a) X-axis
b) Y-axis
c) Z-axis
d) W-axis

Question 4. What is the horizontal axis on a line chart commonly referred to as?

a) X-axis
b) Y-axis
c) Z-axis
d) W-axis

Question 5. What element of a line chart represents the data series?
a) The gridlines
b) The legend
c) The lines
d) The axes

Question 6. In Excel, can you change the color of the lines on your line chart?
a) Yes
b) No
c) Only for the X-axis
d) Only for the Y-axis

Question 7. What is the purpose of a line chart?
a) To display data trends over time
b) To compare individual data points
c) To create a table of data
d) To present a photograph

Question 8. What is a legend in a line chart?
a) A title at the top of the chart
b) A guide that helps to identify the lines of the chart
c) The numerical data on the axes
d) The background color of the chart

Question 9. Can you add more than one line to a single line chart in Excel?
a) Yes
b) No
c) Only horizontal lines
d) Only vertical lines

Question 10. What is the first step to modify the axis labels of a line chart?
a) Right-click on the axis labels
b) Double-click on the axis labels
c) Delete the existing labels
d) Insert new labels

Answer Key:

1. b) Insert tab
2. b) Input the data in cells
3. b) Y-axis
4. a) X-axis
5. c) The lines
6. a) Yes

7. a) To display data trends over time
8. b) A guide that helps to identify the lines of the chart
9. a) Yes
10. a) Right-click on the axis labels

Week 34

Question 1. Which type of data is based on numbers?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 2. Which type of data is based on descriptions?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 3. What can quantitative data be used for?
a) Making graphs
b) Writing essays
c) Creating artwork
d) Composing music

Question 4. What kind of data would the color of a car be considered as?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 5. What kind of data would the weight of a person be considered as?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 6. Which type of data can be measured?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 7. Which type of data represents categories or labels?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 8. What kind of data would a person's opinion be considered as?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 9. What kind of data would the temperature in a room be considered as?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Question 10. Which type of data can be used to find an average or mean?
a) Quantitative data
b) Qualitative data
c) Both
d) Neither

Answer Key:

1. a) Quantitative data
2. b) Qualitative data
3. a) Making graphs
4. b) Qualitative data
5. a) Quantitative data
6. a) Quantitative data
7. b) Qualitative data
8. b) Qualitative data
9. a) Quantitative data
10. a) Quantitative data

Week 35

Question 1. What does "bivariate data" refer to?
a) Data involving two variables
b) Data involving one variable
c) Data involving three variables
d) Data involving no variable

Question 2. In a scatter plot representing bivariate data, what does each point represent?
a) A pair of values
b) A single value
c) A category
d) A percentage

Question 3. What kind of graph is commonly used to represent bivariate data?
a) Pie chart
b) Bar graph
c) Scatter plot

d) Histogram

Question 4. What can a line of best fit in a scatter plot help you do?
a) Predict future data points
b) Find the exact value of existing data points
c) Determine the color of the scatter plot
d) Change the values of existing data points

Question 5. What does the "x-axis" usually represent in a scatter plot?
a) The dependent variable
b) The independent variable
c) The scatter variable
d) The constant variable

Question 6. What does a positive correlation in bivariate data indicate?
a) As one variable increases, the other variable decreases
b) As one variable increases, the other variable also increases
c) The variables are not related
d) The correlation cannot be determined

Question 7. What does a negative correlation in bivariate data indicate?
a) As one variable increases, the other variable decreases
b) As one variable increases, the other variable also increases
c) The variables are not related
d) The correlation cannot be determined

Question 8. What is it called when there is no apparent relationship between the two variables in bivariate data?
a) Positive correlation
b) Negative correlation
c) No correlation
d) Zero correlation

Question 9. In the context of bivariate data, what does "correlation" refer to?
a) The type of graph used
b) The relationship between the two variables
c) The numerical values of the data points
d) The colors used in the graph

Question 10. What can we use to measure the strength and direction of the relationship between two variables in bivariate data?
a) Correlation coefficient
b) Pie chart
c) Bar graph
d) Histogram

Answer Key:

1. a) Data involving two variables

2. a) A pair of values
3. c) Scatter plot
4. a) Predict future data points
5. b) The independent variable
6. b) As one variable increases, the other variable also increases
7. a) As one variable increases, the other variable decreases
8. c) No correlation
9. b) The relationship between the two variables
10. a) Correlation coefficient

Week 36

Question 1. What does the slope of a line represent in a graph showing a proportional relationship?
a) The rise over the run
b) The y-intercept
c) The x-intercept
d) The origin

Question 2. In a proportional relationship graph, what is the value of the y-intercept?
a) 0
b) 1
c) The slope
d) Undefined

Question 3. If two quantities are proportional, their graph will be a:
a) Straight line passing through the origin
b) Curved line
c) Horizontal line
d) Vertical line

Question 4. What does a point on a graph of a proportional relationship represent?
a) A solution to the equation
b) The slope of the line
c) The y-intercept
d) The x-intercept

Question 5. In a graph showing a proportional relationship, what does the x-axis represent?
a) The dependent variable
b) The independent variable
c) The slope
d) The y-intercept

Question 6. What kind of graph represents a direct proportional relationship?
a) A straight line passing through the origin
b) A parabola
c) A circle
d) A hyperbola

Question 7. What is the slope of a horizontal line?
a) 0
b) 1
c) Undefined
d) -1

Question 8. In a graph of a proportional relationship, what does the y-axis represent?
a) The dependent variable
b) The independent variable
c) The slope
d) The x-intercept

Question 9. If you double the value of the independent variable in a proportional relationship, what happens to the dependent variable?
a) It doubles
b) It halves
c) It remains the same
d) It becomes zero

Question 10. What is the slope of a line that represents a relationship where as one variable increases, the other variable decreases?
a) Positive
b) Negative
c) Zero
d) Undefined

Answer Key

1. a) The rise over the run
2. a) 0
3. a) Straight line passing through the origin
4. a) A solution to the equation
5. b) The independent variable
6. a) A straight line passing through the origin
7. a) 0
8. a) The dependent variable
9. a) It doubles
10. b) Negative

Week 37

Question 1. The volume of a cylinder can be found using which of the following shapes?
a) Square
b) Triangle
c) Circle
d) Rectangle

Question 2. Which two measurements are essential to calculate the volume of a cylinder?
a) Radius and height

b) Diameter and height
c) Circumference and height
d) Area and width

Question 3. The base of a cylinder is in the shape of a:
a) Square
b) Rectangle
c) Triangle
d) Circle

Question 4. If the height of a cylinder is doubled while the radius remains the same, the volume will:
a) Stay the same
b) Double
c) Halve
d) Quadruple

Question 5. If the radius of a cylinder is doubled while the height remains the same, the volume will:
a) Stay the same
b) Double
c) Quadruple
d) Halve

Question 6. The volume of a cylinder is calculated by multiplying the area of the base by the:
a) Radius
b) Diameter
c) Height
d) Circumference

Question 7. Which formula represents the volume of a cylinder?
a) Volume = height x radius
b) Volume = height + radius
c) Volume = height x diameter
d) Volume = height x area of the base

Question 8. The larger the radius of a cylinder, the _____ the volume, assuming the height remains the same.
a) Smaller
b) Same
c) Larger
d) Half

Question 9. If you have two cylinders with the same volume, but one has a larger base, the other must have a:
a) Shorter height
b) Longer height

c) Same height
d) Wider base

Question 10. The volume of a cylinder gives us the amount of space it occupies in:
a) Two dimensions
b) Three dimensions
c) One dimension
d) Four dimensions

Answer Key

1. c) Circle
2. a) Radius and height
3. d) Circle
4. b) Double
5. c) Quadruple
6. c) Height
7. d) Volume = height x area of the base
8. c) Larger
9. a) Shorter height
10. b) Three dimensions