## Discovery K12, Inc. Quiz/Test Answers Seventh Grade <u>discoveryk12.com</u>

Course: Math 7

#### Week 1 Quiz

Question 1: Stacy has 3/4 of a quart of apple juice and needs to fill it equally in cups that hold 1/10 of a quart. How many cups can she fill?

A. 7

B. 7.5

C. 8

D. 8.5

Question 2: Mike has 2/3 of a gallon of water and needs to fill it equally in bottles that hold 1/6 of a gallon. How many bottles can he fill?

A. 4

B. 6

C. 8

D. 12

Question 3: Janet has 30 minutes before she needs to leave her house. She needs to cook breakfast, pack her lunch, and do her hair. How many minutes can she allocate to each task?

A. 5 minutes each

B. 10 minutes each

C. 15 minutes for cooking breakfast, 10 minutes for packing lunch, and 5 minutes for doing her hair

D. 10 minutes for cooking breakfast, 5 minutes for packing lunch, and 15 minutes for doing her hair

Question 4: Jake has 45 minutes before his soccer practice. He needs to eat lunch, do his homework, and practice his piano. If he wants to spend twice as much time on homework as on piano, how many minutes can he allocate to each task?

A. 10 minutes for lunch, 20 minutes for homework, and 15 minutes for piano practice

B. 15 minutes for lunch, 20 minutes for homework, and 10 minutes for piano practice

C. 20 minutes for lunch, 15 minutes for homework, and 10 minutes for piano practice

D. 15 minutes for lunch, 30 minutes for homework, and 10 minutes for piano practice

Question 5: Anna has 27 1/4 yards of fabric and needs to cut it in 1/2 yard increments. How many 1/2 yard increments can she cut?

A. 50

B. 54

C. 55

D. 56

Question 6: Lily has 125 feet of rope and needs to cut it in 5 foot increments. How many increments can she cut?

A. 20 B. 25 C. 30 D. 35
Question 7: John has 3/4 of a gallon of juice and needs to fill it equally in bottles that hold 1/8 of a gallon. How many bottles can he fill?  a) 4  b) 6  c) 8  d) 12
Question 8: Sarah has 5/6 of a gallon of milk and needs to fill it equally in bottles that hold 1/6 of a gallon. How many bottles can she fill?  a) 4  b) 5  c) 6  d) 7
Question 9: Mike has 7/8 of a gallon of water and needs to fill it equally in bottles that hold 1/4 of a gallon. How many bottles can he fill?  a) 2  b) 3.5  c) 4  d) 5
Question 10: Jane has 3/5 of a gallon of oil and needs to fill it equally in bottles that hold 1/5 of a gallon. How many bottles can she fill?  a) 2  b) 3  c) 4  d) 5
Answers:
Question 1: B) 7.5 Question 2: A) 4 Question 3: B) 10 minutes each Question 4: B. 15 minutes for lunch, 20 minutes for homework, and 10 minutes for piano practice Question 5: B) 54.5 Question 6: B) 25 Question 7: b) 6 Question 8: b) 5 Question 9: b) 3.5 Question 10: b) 3

### Week 2 Quiz

c) 3/4

# **Question 1:** What is 6/8 equivalent to? a) 3/4 b) 5/7 c) 2/3 d) 4/5 Question 2: What is 10/12 equivalent to? a) 5/6 b) 7/8 c) 3/4 d) 2/3 **Question 3:** What is 14/16 equivalent to? a) 7/8 b) 3/4 c) 5/6 d) 2/3 **Question 4:** What is 9/12 equivalent to? a) 3/4 b) 5/7 c) 2/3 d) 4/5 **Question 5:** What is 15/18 equivalent to? a) 5/6 b) 7/8 c) 3/4 d) 2/3 **Question 6:** What is 21/24 equivalent to? a) 7/8 b) 3/4 c) 5/6 d) 2/3 **Question 7:** What is 12/16 equivalent to? a) 3/4 b) 5/7 c) 2/3 d) 4/5 Question 8: What is 20/24 equivalent to? a) 5/6 b) 7/8

### **Question 9:** What is 28/32 equivalent to?

- a) 7/8
- b) 3/4
- c) 5/6
- d) 2/3

## **Question 10:** What is 15/20 equivalent to?

- a) 3/4
- b) 5/7
- c) 2/3
- d) 4/5

### **Answer Key:**

- 1. a) 3/4
- 2. a) 5/6
- 3. a) 7/8
- 4. a) 3/4
- 5. a) 5/6
- 6. a) 7/8
- 7. a) 3/4
- 8. a) 5/6
- 9. a) 7/8
- 10. a) 3/4

## Week 3 Quiz

Question 1: What is 20% off \$80?

- A. \$8.00
- B. \$16.00
- C. \$64.00
- D. \$72.00

Question 2: What is 10% off \$500?

- A. \$50.00
- B. \$100.00
- C. \$250.00
- D. \$450.00

Question 3: What is 25% off \$120?

- A. \$15.00
- B. \$30.00
- C. \$60.00
- D. \$90.00

Question 4: What is 8% off \$75?

A. \$5.00

- B. \$6.00 C. \$7.00 D. \$8.00 Question 5: What is 12% off \$200? A. \$24.00 B. \$36.00 C. \$48.00 D. \$60.00 Question 6: What is 5% off \$30? A. \$0.50 B. \$1.00 C. \$1.50 D. \$2.00 Question 7: What is 16% off \$300? A. \$36.00 B. \$42.00 C. \$48.00 D. None of the above Question 8: What is 25% off \$60? A. \$10.00 B. \$12.00 C. \$13.00 D. None of the above Question 9: What is the sale price of a \$50 item if it is discounted by 10%? A. \$45.00 B. \$50.00 C. \$55.00 D. All of the above Question 10: If a store is offering a 15% discount on all items, and a customer purchases a \$75 item, what is the sale price? A. \$63.75 B. \$72.50 C. \$78.75 D. All of the above Answers:
  - 1. B. \$16.00
  - 2. A. \$50.00
  - 3. B. \$30.00
  - 4. B. \$6.00
  - 5. A. \$24.00
  - 6. D. \$2.00

- 7. C. 48
- 8. B. \$12.00
- 9. A. \$45.00
- 10. A. \$63.75

### Week 4 Quiz

- Question 1: What is the value of 3 (-6)?
- A. 9
- B. -3
- C. 3
- D. -9
- Question 2: What is the value of (-8) + (-3)?
- A. -11
- B. **-**5
- C. 11
- D. 5
- Question 3: What is the value of (-4) + (-7)?
- A. -11
- B. 11
- C. -3
- D. 3
- Question 4: What is the value of 15 (-9)?
- A. 6
- B. 24
- C. -24
- D. -6
- Question 5: What is the value of 9.2 3.1?
- A. 6.1
- B. 3.1
- C. 12.3
- D. 6.2
- Question 6: What is the value of 3.7 (-1.2)?
- A. -2.5
- B. 4.9
- C. -2.4
- D. 2.5
- Question 7: What is the value of (-8) + (-12)?
- A. -20
- B. 20
- C. 4
- D. -4

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B. 14
C. -8
D. -14
Question 9: What is the value of (-6) - (-9)?
A. 3
B. -3
C. 15
D. -15
Question 10: What is the value of (-12) - (-4)?
A. -16
B. 8
C. -8
D. 16
Answers:
Question 1: A. 9
Question 2: A. -11
Question 3: A. -11
Question 4: B. 24
Question 5: A. 6.1
Question 6: B. 4.9
Question 7: A. -20
Question 8: B. 14
Question 9: A. 3
Question 10: C. -8
Week 5 Quiz
Question 1: What is the value of 276 x 28?
A. 7,728
B. 7,728,000
C. 7,728,888
D. None of the above
Question 2: What is the value of 511 x 21?
A. 10,731
B. 11,731
C. 10,831
D. None of the above
Question 3: What is the value of 3904 x 62?
A. 241,648
B. 241,664
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Question 8: What is the value of 11 - (-3)?

A. 8

C. 240,664 D. None of the above
Question 4: What is the value of 5763 x 47? A. 262,661 B. 271,161 C. 271,161 D. None of the above
Question 5: What is the value of 7 3/4 ÷ 1 1/3? a) 5 13/16 b) 6 1/2 c) 7 1/4 d) 8 2/3
Question 6: What is the value of 15 2/3 ÷ 2 1/3? a) 6 5/7 b) 7 1/3 c) 8 1/2 d) 9 1/4
Question 7: What is the value of 9 1/2 ÷ 1 2/3? a) 5 7/10 b) 6 1/2 c) 5 5/6 d) 7 1/4
Question 8: What is the value of 12 1/4 ÷ 2 1/2?  a) 4 9/10  b) 5 1/2  c) 6 1/4  d) 7 1/3
Question 9: What is the value of 18 3/4 ÷ 3 1/3?  a) 5 1/2  b) 6 1/4  c) 5 5/8  d) 7 1/3
Question 10: What is the value of 21 2/3 ÷ 4 1/3? a) 5 b) 5 1/2 c) 6 d) 6 1/2
Answer Key:
c) 5 5/6 c) 6 1/4

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a) 5 1/2
a) 5
Answers:
Question 1: A. 7,728
Question 2: A. 10,731
Question 3: D. None of the above
Question 4: D. None of the above (270861)
Question 5: a) 5 13/16
Question 6: a) 6 5/7
Question 7: a) 5 7/10
Question 8: a) 4 9/10
Question 9: c) 5 5/8
Question 10: a) 5
Week 6 Quiz (Day 25-29)
Question 1. What is the result of 9 \times (-2 \frac{1}{2})?
a) -22.5
b) -23
c) -21
d) -20
Question 2. What is the result of (-8) \times (-9/10)?
a) -7.2
b) 7.2
c) -8
d) 8
Question 3. What is the result of (-25) \div (-7)?
a) -3.57
b) 3.57
c) -4
d) 4
Question 4. What is the result of 5 \times (-1 \frac{1}{2})?
a) - 7.5
b) -8
c) 7.5
d) 8
Question 5. What is the result of (-6) \times (-8/10)?
a) -4.8
b) 4.8
c) -5
d) 5
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Question 6. What is the result of  $(-30) \div (-6)$ ?

a) -5

- b) 5 c) -6 d) 6
- Question 7. What is the result of  $7 \times (-3 \frac{1}{2})$ ?
- a) -24.5
- b) -25
- c) 24.5
- d) 25
- Question 8. What is the result of  $(-4) \times (-7/10)$ ?
- a) -2.8
- b) 2.8
- c) -3
- d) 3
- Question 9. What is the result of  $(-35) \div (-5)$ ?
- a) -7
- b) 7
- c) -6
- d) 6
- Question 10. What is the result of  $8 \times (-2 \frac{1}{4})$ ?
- a) -18
- b) -17
- c) 18
- d) 17

# **Answer Key:**

- 1. a) -22.5
- 2. b) 7.2
- 3. b) 3.57
- 4. a) -7.5
- 5. b) 4.8
- 6. b) 5
- 7. a) -24.5
- 8. b) 2.8
- 9. b) 7
- 10.a) -18

### Week 7 Quiz

- Question 1. What is the value of (-36) ÷ 6?
- a) -5
- b) 5
- c) -6
- d) 6

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Question 2. What is the value of (-55) \div (-5)?
a) -11
b) 11
c) -5
d) 5
Question 3. What is the value of (-42) ÷ 7?
a) -6
b) 6
c) -7
d) 7
Question 4. What is the value of (-48) \div (-8)?
a) -6
b) 6
c) -8
d) 8
Question 5. What is the value of (-63) \div 7?
a) -9
b) 9
c) -7
d) 7
Question 6. What is the value of (-72) \div (-9)?
a) -8
b) 8
c) -9
d) 9
Question 7. What is the value of (-81) ÷ 9?
a) -9
b) 9
c) -8
d) 8
Question 8. What is the value of (-90) \div (-10)?
a) -9
b) 9
c) -10
d) 10
Question 9. What is the value of (-99) ÷ 11?
a) -9
b) 9
c) -11
d) 11
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Question 10. What is the value of  $(-100) \div (-10)$ ?

a) -10 b) 10 c) -11 d) 11 **Answer Key:** 1. a) -6 2. b) 11 3. a) -6 4. b) 6 5. a) -9 6. b) 8 7. a) -9 8. b) 9 9. a) -9 10.b) 10 Week 8 Quiz Question 1. What is the reciprocal of 5? a) 1/5 b) 2/5 c) 5/2 d) 5 Question 2. What is the result of (-3/4) multiplied by (2/3)? a) - 1/2b) -2/3c) 1/2 d) 2/3 Question 3. What is the reciprocal of 7? a) 7/2 b) 2/7 c) 1/7 d) 7 Question 4. What is the result of (-5/6) multiplied by (3/4)? a) - 5/8b) -2/3c) 5/8 d) 2/3 Question 5. What is the reciprocal of 3? a) 1/3 b) 2/3

c) 3/2 d) 3

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a) 3/7
b) -3/7
c) 2/7
d) -2/7
Question 7. What is the reciprocal of 8?
a) 1/8
b) 2/8
c) 8/2
d) 8
Question 8. What is the result of (-1/3) multiplied by (3/4)?
a) -1/4
b) -1/2
c) 1/4
d) ½
Question 9. What is the reciprocal of 2?
a) 2/3
b) 1/2
c) 2/1
d) 2
Question 10. What is the result of (-1/2) multiplied by (4/5)?
a) -2/5
b) -3/5
c) 2/5
d) 3/5
Answer Key:
   1. a) 1/5
   2. a) -1/2
   3. c) 1/7
   4. a) -5/8
   5. a) 1/3
   6. d) -2/7
   7. a) 1/8
   8. a) -1/4
   9. b) 1/2
   10. a) -2/5
Week 9 Quiz
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Question 1. What is the result of  $-3 \times (-2) \times (-6)$ ?

a) 36 b) -36

Question 6. What is the result of (-2/5) multiplied by (5/7)?

c) 18 d) -18
Question 2. What is the result of 4 x (-2) x (-3)? a) 24 b) -24 c) 12 d) -12
Question 3. What is the result of -5 x (-2) x (-4)? a) 40 b) -40 c) 20 d) -20
Question 4. What is the result of 6 x (-3) x (-2)? a) 36 b) -36 c) 18 d) -18
Question 5. What is the result of -7 x (-2) x (-5)? a) 70 b) -70 c) 35 d) -35
Question 6. What is the result of 8 x (-3) x (-4)? a) 96 b) -96 c) 48 d) -48
Question 7. What is the result of -9 x (-2) x (-6)? a) 108 b) -108 c) 54 d) -54
Question 8. What is the result of 10 x (-3) x (-2)? a) 60 b) -60 c) 30 d) -30
Question 9. What is the result of -11 x (-2) x (-5)? a) 110 b) -110 c) 55

d) -55

Question 10. What is the result of 12 x (-3) x (-4)?

- a) 144
- b) -144
- c) 72
- d) -72

## **Answer Key:**

- 1. b) -36
- 2. a) 24
- 3. a) 40
- 4. a) 36
- 5. b) -70
- 6. a) 96
- 7. b) -108
- 8. a) 60
- 9. b) -110
- 10. a) 144

### Week 10 Quiz

Question 1. When you multiply two positive numbers, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 2. When you multiply two negative numbers, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 3. When you multiply a positive number and a negative number, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 4. When you divide two positive numbers, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 5. When you divide two negative numbers, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 6. When you divide a positive number by a negative number, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 7. When you multiply or divide any number by zero, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 8. When you multiply or divide zero by any number, the result is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 9. The reciprocal of a positive number is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 10. The reciprocal of a negative number is always:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

### **Answer Key:**

- 1. a) Positive
- 2. a) Positive
- 3. b) Negative
- 4. a) Positive
- 5. a) Positive
- 6. b) Negative
- 7. d) Undefined
- 8. c) Zero
- 9. a) Positive
- 10. b) Negative

### Week 11 Quiz

Question 1. What is the result of (-2 a) -8 b) 8 c) 2 d) -2	2)(-4)?
Question 2. What is the result of (-3 a) 15 b) -15 c) -8 d) 8	3)(-5)?
Question 3. What is the result of (-7 a) -1 b) 1 c) 0 d) 3	1)(-1)(-1)?
Question 4. What is the result of (-2 a) -16 b) 16 c) -8 d) 8	2)(-2)(-2)(-2)?
Question 5. What is the result of (-3a) -60b) 60c) 12d) -12	3)(-4)(-5)?
Question 6. What is the result of (-7 a) 9 b) -9 c) 3 d) -3	1)(-3)(-3)?
Question 7. What is the result of (-2 a) -24 b) 24 c) 12 d) -12	2)(-2)(-6)?
Question 8. What is the result of (-7 a) 16 b) -16 c) 8 d) -8	1)(-1)(-4)(-4)?

Question 9. What is the result of (-3)(-3)(-3)(-3)?

- a) 12
- b) -12
- c) 81
- d) -81

Question 10. What is the result of (-1)(-5)(-2)(-2)?

- a) 10
- b) 20
- c) -20
- d) -10

## **Answer Key:**

- 1. b) 8
- 2. a) 15
- 3. a) -1
- 4. b) 16
- 5. a) -60
- 6. b) -9
- 7. a) -24
- 8. a) 16
- 9. c) 81
- 10.b) 20

## Week 12 Quiz

Question 1. The Distributive Property involves which two operations?

- a) Addition and Subtraction
- b) Multiplication and Division
- c) Addition and Multiplication
- d) Subtraction and Division

Question 2. Which expression demonstrates the Distributive Property?

- a) a(b + c) = ab + ac
- b) a + b = b + a
- c) a(bc) = (ab)c
- d) a + 0 = a

Question 3. When using the Distributive Property, you are essentially doing what to the terms inside the parentheses?

- a) Adding them
- b) Subtracting them
- c) Multiplying them
- d) Dividing them

Question 4. The Distributive Property is useful for:

- a) Solving equations
- b) Breaking down complex expressions

- c) Mental math
- d) All of the above

Question 5. Which of the following is NOT an example of the Distributive Property?

- a) 5(x + y) = 5x + 5y
- b) 3(x 2) = 3x 6
- c) 4(x + y) = 4x y
- d) 2(3 + z) = 6 + 2z

Question 6. The Distributive Property states that multiplication distributes over:

- a) Addition only
- b) Subtraction only
- c) Both addition and subtraction
- d) Neither addition nor subtraction

Question 7. The Distributive Property helps in simplifying algebraic expressions by:

- a) Combining like terms
- b) Eliminating parentheses
- c) Factoring out the greatest common factor
- d) Solving for variables

Question 8. Which property states that the order of numbers does not affect the sum or product?

- a) Associative Property
- b) Commutative Property
- c) Distributive Property
- d) Identity Property

Question 9. The Distributive Property is applied when you have:

- a) A number outside and numbers inside parentheses
- b) Two numbers added together
- c) Two numbers multiplied together
- d) A number divided by another number

Question 10. Which expression is equivalent to 3(4 + 5) using the Distributive Property?

- a) 3 + 4 + 5
- b)  $3 \times 4 + 5$
- c)  $3 \times 4 + 3 \times 5$
- d)  $3 + 4 \times 5$

#### **Answer Key:**

- 1. c) Addition and Multiplication
- 2. a) a(b + c) = ab + ac
- 3. c) Multiplying them
- 4. d) All of the above
- 5. c) 4(x + y) = 4x y
- 6. c) Both addition and subtraction
- 7. b) Eliminating parentheses

- 8. b) Commutative Property
- 9. a) A number outside and numbers inside parentheses
- $10. c) 3 \times 4 + 3 \times 5$

c) 3340d) 3332

Week 13 Quiz Question 1. What is the product of 63 and 89 using the Distributive Property? a) 5613 b) 5610 c) 5607 d) 5617 Question 2. What is the product of 96 and 75 using the Distributive Property? a) 7200 b) 7210 c) 7220 d) 7230 Question 3. What is the product of 45 and 32 using the Distributive Property? a) 1440 b) 1445 c) 1450 d) 1455 Question 4. What is the product of 58 and 47 using the Distributive Property? a) 2730 b) 2726 c) 2736 d) 2740 Question 5. What is the product of 21 and 54 using the Distributive Property? a) 1134 b) 1138 c) 1142 d) 1146 Question 6. What is the product of 36 and 85 using the Distributive Property? a) 3060 b) 3065 c) 3070 d) 3075 Question 7. What is the product of 49 and 68 using the Distributive Property? a) 3344 b) 3336

Question 8. What is the product of 72 and 59 using the Distributive Property?

a) 4248 b) 4252 c) 4256 d) 4260
Question 9. What is the product of 83 and 41 using the Distributive Property?  a) 3403 b) 3407 c) 3411 d) 3415
Question 10. What is the product of 27 and 46 using the Distributive Property? a) 1250 b) 1246 c) 1242 d) 1254
Answer Key:
1. c) 5607 2. a) 7200 3. a) 1440 4. b) 2726 5. a) 1134 6. a) 3060 7. d) 3332 8. a) 4248 9. a) 3403 10. c) 1242
Week 14 Quiz
Question 1. Solve for x: 2x - 5 = 13 a) 8 b) 9 c) 10 d) 11
Question 2. Solve for x: x/4 + 5 = 11 a) 20 b) 22 c) 24 d) 26
Question 3. Solve for x: 3x + 4 = 19 a) 4 b) 5 c) 6 d) 7

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Question 4. Solve for x: x/3 - 2 = 4
a) 16
b) 18
c) 20
d) 22
Question 5. Solve for x: 4x + 3 = 23
a) 4
b) 5
c) 6
d) 7
Question 6. Solve for x: x/5 + 3 = 8
a) 20
b) 22
c) 24
d) 25
Question 7. Solve for x: 5x - 6 = 19
a) 4
b) 5
c) 6
d) 7
Question 8. Solve for x: x/6 + 4 = 10
a) 32
b) 34
c) 36
d) 38
Question 9. Solve for x: 6x + 2 = 32
a) 4
b) 5
c) 6
d) 7
Question 10. Solve for x: x/7 + 2 = 9
a) 45
b) 47
c) 49
d) 51
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## **Answer Key:**

- 1. b) 9
- 2. c) 24
- 3. b) 5
- 4. b) 18

5. b) 5 6. d) 25 7. b) 5 8. c) 36 9. b) 5 10. c) 49
Week 15 Quiz
Question 1. The difference between six times a number and ten is fifty. What is the number?  a) 9 b) 10 c) 11 d) 12
Question 2. The difference between twice a number and seven is equal to the product of the number and three. What is the number?  a) 5  b) 6  c) 7  d) 8
Question 3. The sum of three times a number and ten is forty. What is the number?  a) 8 b) 9 c) 10 d) 11
Question 4. The difference between four times a number and six is thirty. What is the number?  a) 8 b) 9 c) 10 d) 11
Question 5. The sum of five times a number and seven is forty-two. What is the number?  a) 6 b) 7 c) 8 d) 9
Question 6. The difference between seven times a number and nine is forty-seven. What is the number?  a) 9  b) 8  c) 10  d) 11

Question 7. The sum of eight times a number and six is seventy. What is the number? a) 7 b) 8 c) 9 d) 10
Question 8. The difference between nine times a number and eleven is seventy-nine. What is the number?  a) 9  b) 12  c) 11  d) 10
Question 9. The sum of twice a number and twelve is twenty-eight. What is the number?  a) 6 b) 8 c) 9 d) 7
Question 10. The difference between three times a number and thirteen is twenty. What is the number?  a) 10 b) 11 c) 12 d) 13
Answer Key:
1. b) 10 2. c) 7 3. c) 10 4. b) 9 5. b) 7 6. b) 8 7. b) 8 8. d) 10 9. b) 8 10. b) 11
Week 16
Question 1. If a problem states that "John has at least 5 apples," which inequality best represents this situation?  a) John $< 5$ b) John $> 5$ c) John $\le 5$ d) John $\ge 5$

repres a) Sar b) Sar c) Sar	ion 2. If a problem mentions "Sarah has no more than 10 books," which inequality sents this? rah > 10 rah < 10 rah ≥ 10 rah ≤ 10 rah ≤ 10
Quest this? a) Mik b) Mik c) Mik d) Mik	xe < 6 xe = 6
inequa a) Stu b) Stu c) Stu	ion 4. If a problem states "There are at most 15 students in the classroom," which ality is correct?  dents > 15  dents < 15  dents = 15  dents ≤ 15
would a) Em b) Em c) Em	ion 5. If a word problem mentions "Emily saved more than \$100," which inequality you use? ily > \$100 ily < \$100 ily = \$100 ily ≤ \$100
set of a) 20 b) 20 c) 20	ion 6. If a problem says "The tree is taller than 20 feet but shorter than 30 feet," which inequalities is correct? < tree < 30 > tree > 30 ≤ tree ≤ 30 = tree = 30
inequa a) Per b) Per c) Per	tion 8. If a problem mentions "There are at least 7 pencils in the drawer," which ality is correct?  ncils > 7  ncils < 7  ncils = 7  ncils ≥ 7

Question 9. If a word problem says "The number of candies in the jar is not more than 100," how would you represent this?

- a) Candies > 100
- b) Candies < 100
- c) Candies = 100
- d) Candies ≤ 100

Question 10. If a problem states "The height of the building is exactly 50 meters," which inequality is correct?

- a) Building > 50
- b) Building < 50
- c) Building = 50
- d) Building ≤ 50

### **Answer Key:**

- 1. d) John  $\geq 5$
- 2. d) Sarah ≤ 10
- 3. b) Mike < 6
- 4. d) Students  $\leq 15$
- 5. a) Emily > \$100
- 6. a) 20 < tree < 30
- 7. d) Box  $\ge 50$
- 8. d) Pencils  $\geq 7$
- 9. d) Candies ≤ 100
- 10. c) Building = 50

#### Week 17

Question 1. Which of the following is NOT a characteristic of a polygon?

- a) Closed shape
- b) Curved sides
- c) Made up of straight lines
- d) The sides do not cross each other

Question 2. How many sides does a hexagon have?

- a) 4
- b) 5
- c) 6
- d) 7

Question 3. Which polygon has all sides and angles equal?

- a) Quadrilateral
- b) Rectangle
- c) Regular polygon
- d) Trapezoid

Question 4. What is a three-sided polygon called?

a) Triangle

b) Quadrilateral c) Pentagon d) Hexagon

Question 5. Which of the following polygons can have parallel sides?

- a) Triangle
- b) Pentagon
- c) Octagon
- d) All of the above

Question 6. How many diagonals does a square have?

- a) 0
- b) 1
- c) 2
- d) 4

Question 7. Which of the following is NOT a type of quadrilateral?

- a) Pentagon
- b) Rectangle
- c) Parallelogram
- d) Rhombus

Question 8. If a polygon has 8 sides, what is it called?

- a) Hexagon
- b) Heptagon
- c) Octagon
- d) Nonagon

Question 9. Which of the following polygons does not always have right angles?

- a) Square
- b) Rectangle
- c) Rhombus
- d) Parallelogram

Question 10. What is the sum of the interior angles of a pentagon?

- a) 360 degrees
- b) 540 degrees
- c) 720 degrees
- d) 180 degrees

### **Answer Key:**

- 1. b) Curved sides
- 2. c) 6
- 3. c) Regular polygon
- 4. a) Triangle
- 5. d) All of the above
- 6. c) 2
- 7. a) Pentagon

- 8. c) Octagon
- 9. c) Rhombus
- 10. b) 540 degrees

#### Week 18

Question 1. What does a scale factor greater than 1 do to a shape?

- a) Makes it smaller
- b) Makes it larger
- c) Does not change it
- d) Flips it

Question 2. If a shape is reduced to half its size, what is the scale factor?

- a) 0.5
- b) 1
- c) 2
- d) 0.25

Question 3. Which of the following best describes a scale factor?

- a) A measurement of area
- b) A measurement of perimeter
- c) A ratio that describes how one shape relates to another in size
- d) A tool used to measure distance

Question 4. If two shapes are similar, what can be said about their corresponding angles?

- a) They are different
- b) They are congruent
- c) They are supplementary
- d) They are complementary

Question 5. If a rectangle has been enlarged by a scale factor of 3, how much larger is its area compared to the original?

- a) 3 times
- b) 6 times
- c) 9 times
- d) 12 times

Question 6. What happens to the perimeter of a shape when it's scaled by a factor of 2?

- a) It doubles
- b) It halves
- c) It remains the same
- d) It quadruples

Question 7. If a triangle is reduced using a scale factor of 0.25, what happens to its height and base?

a) Both are divided by 4

- b) Both are multiplied by 4
- c) Both remain the same
- d) Both are squared

Question 8. Which of the following is NOT affected by a scale factor?

- a) Size
- b) Shape
- c) Area
- d) Orientation

Question 9. If the scale factor of a circle is 0.5, what happens to its radius?

- a) It remains the same
- b) It doubles
- c) It is halved
- d) It is squared

Question 10. When a shape is scaled down, what happens to its angles?

- a) They become smaller
- b) They become larger
- c) They remain the same
- d) They become right angles

### **Answer Key:**

- 1. b) Makes it larger
- 2. a) 0.5
- 3. c) A ratio that describes how one shape relates to another in size
- 4. b) They are congruent
- 5. c) 9 times
- 6. a) It doubles
- 7. a) Both are divided by 4
- 8. d) Orientation
- 9. c) It is halved
- 10. c) They remain the same

#### Week 19

Question 1. When you slice a cube horizontally through the middle, what shape is the cross section?

- a) Triangle
- b) Circle
- c) Square
- d) Rectangle

Question 2. If you slice a cone from the tip to the base, the cross section will be:

- a) A circle
- b) A triangle
- c) A rectangle
- d) An ellipse

Question 3. When you slice a cylinder vertically and parallel to its base, the cross section is:

- a) A rectangle
- b) A circle
- c) An oval
- d) A triangle

Question 4. What shape is the cross section when you slice a sphere in half?

- a) Square
- b) Circle
- c) Triangle
- d) Rectangle

Question 5. If you slice a pyramid from the tip to the base, the cross section will be:

- a) A triangle
- b) A rectangle
- c) A square
- d) A circle

Question 6. When you slice a cube diagonally from one corner to the opposite corner, the cross section is:

- a) A triangle
- b) A rectangle
- c) A parallelogram
- d) A trapezoid

Question 7. If you slice a cylinder horizontally, the cross section will be:

- a) A rectangle
- b) A circle
- c) An oval
- d) A triangle

Question 8. When you slice a cone horizontally near the base, the cross section is:

- a) A circle
- b) A triangle
- c) A rectangle
- d) An ellipse

Question 9. What shape is the cross section when you slice a rectangular prism diagonally from one corner of the base to the opposite corner of the top?

- a) Triangle
- b) Rectangle
- c) Parallelogram
- d) Trapezoid

Question 10. If you slice a pyramid horizontally near the base, the cross section will be:

- a) A triangle
- b) A rectangle
- c) A square

### d) A circle

### **Answer Key:**

- 1. c) Square
- 2. b) A triangle
- 3. a) A rectangle
- 4. b) Circle
- 5. a) A triangle
- 6. c) A parallelogram
- 7. b) A circle
- 8. a) A circle
- 9. c) Parallelogram
- 10. c) A square

#### Week 20

Question 1. What do you need to know to find the area of a circle?

- a) Diameter
- b) Radius
- c) Circumference
- d) Side length

Question 2. If you double the radius of a circle, what happens to its area?

- a) It doubles
- b) It triples
- c) It quadruples
- d) It remains the same

Question 3. Which part of the circle is used in the formula to calculate its area?

- a) Diameter
- b) Radius
- c) Circumference
- d) Side length

Question 4. What shape is formed when you cut a circle in half?

- a) Square
- b) Rectangle
- c) Semi-circle
- d) Triangle

Question 5. If two circles have the same radius, they will have the same:

- a) Diameter
- b) Circumference
- c) Area
- d) All of the above

Question 6. The center of a circle is also the endpoint of:

a) Diameter

- b) Radius
- c) Circumference
- d) Side length

Question 7. Which of the following is true about the area of a circle?

- a) It is the space inside the circle
- b) It is the distance around the circle
- c) It is the length across the circle
- d) It is the length from the center to the edge

Question 8. If you know the diameter of a circle, how can you find the radius?

- a) Multiply by 2
- b) Divide by 2
- c) Multiply by 3
- d) Add 2

Question 9. Which of the following is closest in shape to a circle?

- a) Square
- b) Rectangle
- c) Oval
- d) Triangle

Question 10. If a circle has a larger area, it will also have a larger:

- a) Diameter
- b) Radius
- c) Circumference
- d) All of the above

### **Answer Key:**

- 1. b) Radius
- 2. c) It quadruples
- 3. b) Radius
- 4. c) Semi-circle
- 5. d) All of the above
- 6. b) Radius
- 7. a) It is the space inside the circle
- 8. b) Divide by 2
- 9. c) Oval
- 10. d) All of the above

### Week 21

Question 1. In similar triangles, corresponding angles are:

- a) Different
- b) Congruent
- c) Acute
- d) Obtuse

Question 2. If two triangles are similar, their corresponding sides are:

- a) Congruent
- b) In proportion
- c) Equal in length
- d) Perpendicular

Question 3. To solve for an unknown side in similar triangles, you can use:

- a) Subtraction
- b) Multiplication
- c) Ratios
- d) Square roots

Question 4. The symbol used to denote that two triangles are similar is:

- a) =
- b) ~
- c) >
- d) <

Question 5. If one triangle has sides of 3, 4, and 5, and a similar triangle has a side of length 6 corresponding to the side of length 3, what property do the triangles exhibit?

- a) Congruence
- b) Proportional sides
- c) Equal areas
- d) Right angles

Question 6. When two triangles are similar, the ratio of their perimeters is equal to the ratio of their:

- a) Heights
- b) Areas
- c) Corresponding sides
- d) Angles

Question 7. If you know the lengths of two sides in one triangle and one side in a similar triangle, you can:

- a) Find the area of the second triangle
- b) Find the length of the missing side in the second triangle
- c) Determine that the triangles are congruent
- d) Find the height of the second triangle

Question 8. The Side-Side (SSS) similarity theorem states:

- a) If three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent.
- b) If three sides of one triangle are proportional to three sides of another triangle, then the triangles are similar.
- c) If two sides of one triangle are congruent to two sides of another triangle, then the triangles are similar.
- d) If two sides of one triangle are proportional to two sides of another triangle, then the triangles are congruent.

Question 9. To determine if two triangles are similar using the Angle-Angle (AA) postulate, you need to know:

- a) Two angles of one triangle and two angles of another triangle are congruent.
- b) Two sides of one triangle and two sides of another triangle are congruent.
- c) The area of both triangles.
- d) The height of both triangles.

Question 10. If two triangles are similar and the scale factor of their sides is 2:3, this means:

- a) The second triangle's sides are twice as long as the first triangle's sides.
- b) The first triangle's sides are twice as long as the second triangle's sides.
- c) The second triangle's sides are 1.5 times longer than the first triangle's sides.
- d) The first triangle's sides are 1.5 times longer than the second triangle's sides.

#### **Answer Key:**

- 1. b) Congruent
- 2. b) In proportion
- 3. c) Ratios
- 4. b)~
- 5. b) Proportional sides
- 6. c) Corresponding sides
- 7. b) Find the length of the missing side in the second triangle
- 8. b) If three sides of one triangle are proportional to three sides of another triangle, then the triangles are similar.
- 9. a) Two angles of one triangle and two angles of another triangle are congruent.
- 10. c) The second triangle's sides are 1.5 times longer than the first triangle's sides.

#### Week 22

Question 1. To find the perimeter of a right triangle, you should:

- a) Add up the lengths of all three sides.
- b) Multiply the length of the hypotenuse by 2.
- c) Add up the lengths of the two shorter sides.
- d) Multiply the base by the height.

Question 2. The hypotenuse is:

- a) The shortest side of the triangle.
- b) The side opposite the right angle.
- c) Always equal to the sum of the other two sides.
- d) The side adjacent to the right angle.

Question 3. If one leg of a right triangle is 5 units and the other leg is 12 units, the perimeter is:

- a) 17 units.
- b) More than 29 units.
- c) Less than 29 units.
- d) Exactly 29 units.

Question 4. The perimeter of a right triangle can be found without knowing:

- a) The area.
- b) The hypotenuse.
- c) The height.
- d) The base.

Question 5. If the hypotenuse of a right triangle is 13 units and one leg is 5 units, the other leg is:

- a) 8 units.
- b) 12 units.
- c) 10 units.
- d) 6 units.

Question 6. The perimeter of a right triangle is always:

- a) Equal to the sum of the squares of the two shorter sides.
- b) Greater than the length of the hypotenuse.
- c) Less than the sum of the squares of the two shorter sides.
- d) Equal to the square root of the sum of the squares of the two shorter sides.

Question 7. If you double the lengths of all sides of a right triangle, the perimeter will:

- a) Stay the same.
- b) Double.
- c) Triple.
- d) Halve.

Question 8. The perimeter of a right triangle is 30 units. If the hypotenuse is 13 units, the sum of the other two sides is:

- a) 13 units.
- b) 17 units.
- c) 30 units.
- d) 23 units.

Question 9. If the perimeter of a right triangle is equal to the sum of the perimeters of two other right triangles, then:

- a) All three triangles are congruent.
- b) The three triangles have the same area.
- c) The three triangles have the same hypotenuse.
- d) The three triangles can have different side lengths.

Question 10. The perimeter of a right triangle is NOT influenced by:

- a) The area of the triangle.
- b) The length of the hypotenuse.
- c) The length of one leg.
- d) The length of the other leg.

#### **Answer Key:**

- 1. a) Add up the lengths of all three sides.
- 2. b) The side opposite the right angle.
- 3. b) More than 29 units.

- 4. a) The area.
- 5. a) 8 units.
- 6. b) Greater than the length of the hypotenuse.
- 7. b) Double.
- 8. b) 17 units.
- 9. d) The three triangles can have different side lengths.
- 10. a) The area of the triangle.

#### Week 23

Question 1. In Excel, which function is used to calculate the variance for a sample?

- a) VAR
- b) VARIANCE
- c) VARS
- d) VAR.P

Question 2. If you want to calculate the variance for an entire population in Excel, which function would you use?

- a) VAR
- b) VARIANCE
- c) VARS
- d) VAR.P

Question 3. Variance measures:

- a) The average of the data set
- b) The spread between numbers in a data set
- c) The middle value of a data set
- d) The difference between the highest and lowest values

Question 4. In Excel, what should you do before using the variance function?

- a) Sort the data in ascending order
- b) Convert the data to percentages
- c) Ensure there are no non-numeric values in the range
- d) Change the data to a pie chart

Question 5. Which of the following is NOT a step in calculating variance?

- a) Finding the mean
- b) Subtracting the mean and squaring the result for each number
- c) Taking the square root of the sum of the squared results
- d) Dividing the sum of the squared results by the number of data points

Question 6. In Excel, if you have your data in cells A1 to A10, how would you find the variance for this sample?

- a) =VAR(A1:A10)
- b) =VARIANCE(A1:A10)
- c) = VARS(A1)
- d) =VAR.P(A1+A10)

Question 7. A lower variance indicates:

- a) The data points are spread out from the mean
- b) The data points are closer to the mean
- c) The data set has many outliers
- d) The mean is a small number

Question 8. If you have calculated the variance and now want to find the standard deviation in Excel, which function would you use?

- a) STDEV
- b) STD
- c) STDEVA
- d) STDP

Question 9. Which of the following statements is true about variance?

- a) Variance can be a negative number
- b) Variance is always smaller than the standard deviation
- c) Variance is the square of the standard deviation
- d) Variance is the square root of the mean

Question 10. In Excel, which function calculates the variance and takes into account text or logical values?

- a) VARA
- b) VARS
- c) VAR.P
- d) VARIANCE

## **Answer Key:**

- 1. a) VAR
- 2. d) VAR.P
- 3. b) The spread between numbers in a data set
- 4. c) Ensure there are no non-numeric values in the range
- 5. c) Taking the square root of the sum of the squared results
- 6. a) =VAR(A1:A10)
- 7. b) The data points are closer to the mean
- 8. a) STDEV
- 9. c) Variance is the square of the standard deviation
- 10. a) VARA

#### Week 24

Question 1. Probability is always a value between:

- a) 0 and 10
- b) -1 and 1
- c) 0 and 1
- d) 1 and 100

Question 2. If an event is certain to happen, its probability is:

- a) 0
- b) 0.5

c) 1 d) 100
Question 3. The probability of an impossible event is: a) 0 b) 0.5 c) 1 d) 100
Question 4. The sum of the probabilities of all possible outcomes of an experiment is: a) 0 b) 0.5 c) 1 d) 100
Question 5. If there are 3 red balls and 2 blue balls in a bag, what is the probability of drawing a green ball?  a) 0  b) 0.5  c) 1  d) 0.6
Question 6. The probability of an event not happening is called: a) Likely probability b) Complementary probability c) Impossible probability d) Certain probability
Question 7. If the probability of raining tomorrow is 0.7, what is the probability that it will not rain? a) $0.3$ b) $0.7$ c) $1.4$ d) $0$
Question 8. If you flip a fair coin, what is the probability it lands on tails? a) 0 b) 0.25 c) 0.5 d) 1
Question 9. In a standard deck of cards, what is the probability of drawing a king? a) 1/52 b) 4/52 c) 1/4 d) 1/13
Question 10. If you roll a standard six-sided die, what is the probability of rolling a number greater than 6?

- a) 0
- b) 1/6
- c) 1
- d) 6/6

# **Answer Key:**

- 1. c) 0 and 1
- 2. c) 1
- 3. a) 0
- 4. c) 1
- 5. a) 0
- 6. b) Complementary probability
- 7. a) 0.3
- 8. c) 0.5
- 9. b) 4/52
- 10. a) 0

#### Week 25

Question 1. A frequency distribution is primarily used to:

- a) Predict future data points
- b) Organize data into categories
- c) Calculate the median of a data set
- d) Determine the outliers in a data set

Question 2. The sum of all frequencies in a frequency distribution table is equal to:

- a) The range of the data
- b) The mean of the data
- c) The total number of data points
- d) The number of categories

Question 3. In a frequency distribution table, what does the 'frequency' represent?

- a) The average value of each category
- b) The difference between the highest and lowest values
- c) The number of times each category appears in the data set
- d) The total number of categories

Question 4. If data is grouped into intervals in a frequency distribution, it is called:

- a) Cumulative frequency
- b) Relative frequency
- c) Grouped frequency
- d) Ungrouped frequency

Question 5. The 'cumulative frequency' is:

- a) The sum of the frequencies for all categories up to the current category
- b) The frequency of the most common category
- c) The difference between the highest and lowest frequencies
- d) The average frequency of all categories

Question 6. A histogram is a graphical representation of:

- a) Cumulative frequency
- b) A pie chart
- c) A frequency distribution
- d) A scatter plot

Question 7. The 'class width' in a grouped frequency distribution refers to:

- a) The difference between the highest and lowest data points
- b) The range of data values in each interval or category
- c) The total number of categories
- d) The average value of each category

Question 8. Relative frequency is calculated by:

- a) Dividing the frequency of a category by the total number of data points
- b) Multiplying the frequency of a category by the total number of data points
- c) Adding the frequency of a category to the total number of data points
- d) Subtracting the frequency of a category from the total number of data points

Question 9. A frequency polygon is drawn by:

- a) Connecting the midpoints of the tops of the bars in a histogram
- b) Drawing a circle and dividing it into sectors
- c) Plotting each data point individually
- d) Drawing bars that touch each other

Question 10. If the data is not grouped, the frequency distribution is called:

- a) Cumulative frequency distribution
- b) Grouped frequency distribution
- c) Ungrouped frequency distribution
- d) Relative frequency distribution

## **Answer Key:**

- 1. b) Organize data into categories
- 2. c) The total number of data points
- 3. c) The number of times each category appears in the data set
- 4. c) Grouped frequency
- 5. a) The sum of the frequencies for all categories up to the current category
- 6. c) A frequency distribution
- 7. b) The range of data values in each interval or category
- 8. a) Dividing the frequency of a category by the total number of data points
- 9. a) Connecting the midpoints of the tops of the bars in a histogram
- 10. c) Ungrouped frequency distribution

#### Week 26

Question 1. In a Venn Diagram, what does the overlapping region of two circles represent?

- a) Elements that are only in one set.
- b) Elements that are in neither set.

- c) Elements that are in both sets.
- d) The universal set.

Question 2. If you shade the area outside both circles in a Venn Diagram, what are you representing?

- a) The intersection of the two sets.
- b) The union of the two sets.
- c) Elements that are in neither set.
- d) Elements that are in both sets.

Question 3. In the context of a Venn Diagram, what is the universal set?

- a) The set of all elements in both circles.
- b) The set of elements in the overlapping region.
- c) The entire rectangular region containing the circles.
- d) The set of elements outside the circles.

Question 4. If Set A is entirely shaded in a Venn Diagram, which of the following is being represented?

- a) Only the elements in Set A.
- b) The elements in Set A and Set B.
- c) The elements not in Set A.
- d) The elements in Set B but not in Set A.

Question 5. What does the non-overlapping part of a circle in a Venn Diagram represent?

- a) Elements that are in both sets.
- b) Elements that are only in that set.
- c) Elements that are in neither set.
- d) The universal set.

Question 6. If you shade only the overlapping region of two circles in a Venn Diagram, which set are you representing?

- a) Set A union Set B.
- b) Set A minus Set B.
- c) Set A intersect Set B.
- d) The complement of Set A.

Question 7. In a Venn Diagram with two sets, how many distinct regions are there, including the outside of the circles?

- a) 2
- b) 3
- c) 4
- d) 5

Question 8. If you shade the area of Set B that does not overlap with Set A, what are you representing?

- a) Set A intersect Set B.
- b) Set A union Set B.
- c) Set B minus Set A.
- d) The complement of Set B.

Question 9. Which region represents the union of Set A and Set B in a Venn Diagram?

- a) Only the overlapping region.
- b) The entire area inside both circles.
- c) The area outside both circles.
- d) The non-overlapping part of Set A.

Question 10. If you do not shade any part of the Venn Diagram, what are you representing?

- a) The universal set.
- b) The intersection of Set A and Set B.
- c) The empty set.
- d) The union of Set A and Set B.

# **Answer Key:**

- 1. c) Elements that are in both sets.
- 2. c) Elements that are in neither set.
- 3. c) The entire rectangular region containing the circles.
- 4. a) Only the elements in Set A.
- 5. b) Elements that are only in that set.
- 6. c) Set A intersect Set B.
- 7. c) 4
- 8. c) Set B minus Set A.
- 9. b) The entire area inside both circles.
- 10. c) The empty set.

## Week 27

Question 1. Which of the following represents a certain event?

- a) Winning the lottery.
- b) Raining tomorrow.
- c) A tossed coin landing heads up.
- d) The sun rising tomorrow.

Question 2. If an event has no chance of occurring, its probability is:

- a) 0
- b) 0.5
- c) 1
- d) 100%

Question 3. What is the probability of rolling a 3 on a standard six-sided die?

- a) 1/3
- b) 1/6
- c) 1/2
- d) 1/4

Question 4. Which of the following represents an impossible event?

- a) Drawing a red card from a standard deck of cards.
- b) Rolling a 7 on a standard six-sided die.

- c) Getting tails on a coin toss.
- d) Drawing an ace from a standard deck of cards.

Question 5. When the outcomes of an event are equally likely, the event is said to be:

- a) Biased
- b) Fair
- c) Unfair
- d) Skewed

Question 6. If you have a bag with 3 red balls and 2 blue balls, what is the probability of drawing a green ball?

- a) 0
- b) 1/5
- c) 3/5
- d) 2/5

Question 7. Which of the following is closest to the probability of getting heads when flipping a coin?

- a) 10%
- b) 25%
- c) 50%
- d) 100%

Question 8. If an event is certain to happen, its probability is:

- a) 0
- b) 0.5
- c) 1
- d) 100%

Question 9. What is the total probability of all possible outcomes of an event?

- a) 0
- b) 0.5
- c) 1
- d) It varies depending on the event.

Question 10. If two events cannot both happen at the same time, they are:

- a) Independent
- b) Dependent
- c) Mutually exclusive
- d) Complementary

## **Answer Key:**

- 1. d) The sun rising tomorrow.
- 2. a) 0
- 3. b) 1/6
- 4. b) Rolling a 7 on a standard six-sided die.
- 5. b) Fair
- 6. a) 0

- 7. c) 50%
- 8. c) 1
- 9. c) 1
- 10. c) Mutually exclusive.

#### Week 28

Question 1. If the outcome of one event does not affect the outcome of another event, these events are:

- a) Dependent
- b) Independent
- c) Mutually exclusive
- d) Complementary

Question 2. If you roll a die and then flip a coin, these two events are:

- a) Dependent
- b) Independent
- c) Mutually exclusive
- d) Complementary

Question 3. If you draw a card from a deck and then draw another card without replacing the first card, these events are:

- a) Dependent
- b) Independent
- c) Mutually exclusive
- d) Complementary

Question 4. Which of the following best describes dependent events?

- a) Events that have no effect on each other.
- b) Events that cannot happen at the same time.
- c) Events where the outcome of one affects the outcome of the other.
- d) Events that always happen together.

Question 5. If two events A and B are independent, the probability of both events happening is:

- a) P(A) + P(B)
- b) P(A) P(B)
- c) P(A) divided by P(B)
- d) P(A) times P(B)

Question 6. Which of the following is an example of dependent events?

- a) Tossing two coins.
- b) Rolling a die and choosing a card from a deck.
- c) Drawing two cards from a deck without replacement.
- d) Spinning a spinner twice.

Question 7. If you have a bag with 4 red balls and 3 blue balls, and you draw one ball at a time without replacement, the events are:

a) Independent

- b) Dependent
- c) Mutually exclusive
- d) Complementary

Question 8. Two events that have no outcomes in common are:

- a) Independent
- b) Dependent
- c) Mutually exclusive
- d) Complementary

Question 9. If the probability of Event A happening is 0.5 and the probability of Event B happening is 0.3, and both events are independent, what is the probability of both events happening?

- a) 0.8
- b) 0.2
- c) 0.15
- d) 0.07

Question 10. If you draw a card from a deck, replace it, and then draw another card, these events are:

- a) Dependent
- b) Independent
- c) Mutually exclusive
- d) Complementary

## **Answer Key:**

- 1. b) Independent
- 2. b) Independent
- 3. a) Dependent
- 4. c) Events where the outcome of one affects the outcome of the other.
- 5. d) P(A) times P(B)
- 6. c) Drawing two cards from a deck without replacement.
- 7. b) Dependent
- 8. c) Mutually exclusive
- 9. c) 0.15
- 10. b) Independent

#### Week 29

Question 1. Compound probability is the probability of:

- a) One event happening.
- b) Both events happening at the same time.
- c) Two or more events happening in sequence.
- d) An event not happening.

Question 2. If two events are independent, the compound probability of both occurring is found by:

a) Adding their probabilities.

- b) Subtracting their probabilities.
- c) Multiplying their probabilities.
- d) Dividing their probabilities.

Question 3. If you flip a coin and roll a die, the number of possible outcomes is:

- a) 2
- b) 6
- c) 8
- d) 12

Question 4. Compound probability is often used when:

- a) Considering more than one event.
- b) Considering only one event.
- c) Considering impossible events.
- d) Considering certain events.

Question 5. If two events are mutually exclusive, the compound probability of both occurring is:

- a) 0
- b) 0.5
- c) 1
- d) It depends on the events.

Question 6. When considering the compound probability of two independent events, if one event becomes more likely:

- a) It does not affect the other event.
- b) It makes the other event less likely.
- c) It makes the other event more likely.
- d) It guarantees the other event will happen.

Question 7. A compound event that consists of two or more simple events is also known as:

- a) A complex event.
- b) A combined event.
- c) A joint event.
- d) A singular event.

Question 8. If you want to find the probability of drawing a red card from a deck and then rolling a 3 on a die, you are looking for:

- a) A simple probability.
- b) A compound probability.
- c) A theoretical probability.
- d) An experimental probability.

Question 9. The probability of an event not happening is called its:

- a) Opposite probability.
- b) Complementary probability.
- c) Joint probability.
- d) Mutual probability.

Question 10. If two events are dependent, the compound probability of both occurring is found by:

- a) Multiplying their probabilities.
- b) Adding their probabilities.
- c) Subtracting their probabilities.
- d) Dividing their probabilities.

## **Answer Key:**

- 1. c) Two or more events happening in sequence.
- 2. c) Multiplying their probabilities.
- 3. d) 12
- 4. a) Considering more than one event.
- 5. a) 0
- 6. a) It does not affect the other event.
- 7. c) A joint event.
- 8. b) A compound probability.
- 9. b) Complementary probability.
- 10. a) Multiplying their probabilities.

#### Week 30

Question 1. Compound probability is the probability of:

- a) One event happening.
- b) Both events happening at the same time.
- c) Two or more events happening in sequence.
- d) An event not happening.

Question 2. If two events are independent, the compound probability of both occurring is found by:

- a) Adding their probabilities.
- b) Subtracting their probabilities.
- c) Multiplying their probabilities.
- d) Dividing their probabilities.

Question 3. If you flip a coin and roll a die, the number of possible outcomes is:

- a) 2
- b) 6
- c) 8
- d) 12

Question 4. Compound probability is often used when:

- a) Considering more than one event.
- b) Considering only one event.
- c) Considering impossible events.
- d) Considering certain events.

Question 5. If two events are mutually exclusive, the compound probability of both occurring is:

- a) 0
- b) 0.5
- c) 1
- d) It depends on the events.

Question 6. When considering the compound probability of two independent events, if one event becomes more likely:

- a) It does not affect the other event.
- b) It makes the other event less likely.
- c) It makes the other event more likely.
- d) It guarantees the other event will happen.

Question 7. A compound event that consists of two or more simple events is also known as:

- a) A complex event.
- b) A combined event.
- c) A singular event.
- d)None of the above.

Question 8. If you want to find the probability of drawing a red card from a deck and then rolling a 3 on a die, you are looking for:

- a) A simple probability.
- b) A compound probability.
- c) A theoretical probability.
- d) An experimental probability.

Question 9. The probability of an event not happening is called its:

- a) Opposite probability.
- b) Complementary probability.
- c) Joint probability.
- d) Mutual probability.

Question 10. If two events are dependent, the compound probability of both occurring is found by:

- a) Multiplying their probabilities.
- b) Adding their probabilities.
- c) Subtracting their probabilities.
- d) Dividing their probabilities.

#### **Answer Key:**

- 1. c) Two or more events happening in sequence.
- 2. c) Multiplying their probabilities.
- 3. d) 12
- 4. a) Considering more than one event.
- 5. a) 0
- 6. a) It does not affect the other event.
- 7. b) A combined event.
- 8. b) A compound probability.
- 9. b) Complementary probability.
- 10. a) Multiplying their probabilities.

# Week 31

Question 1. What is the probability of an impossible event? a) 0 b) 0.5 c) 1 d) It cannot be determined
Question 2. If an event is certain to happen, what is its probability?  a) 0  b) 0.5  c) 1  d) It depends on the event
Question 3. Which of the following represents a probability model?  a) A list of all possible outcomes  b) A list of outcomes with their probabilities  c) A pie chart showing data  d) A bar graph showing frequency
Question 4. In a probability model, the sum of all probabilities must equal to: a) 0 b) 0.5 c) 1 d) The number of outcomes
Question 5. Which of the following is NOT a valid probability?  a) 0.75  b) 1.25  c) 0  d) 1
Question 6. If two events are complementary, their probabilities add up to: a) 0 b) 0.5 c) 1 d) 2
Question 7. What is the probability of rolling a 3 on a fair six-sided die?  a) 1/3 b) 1/2 c) 1/6 d) 1/4
Question 8. If an event has a probability of 0.7, its complement has a probability of: a) 0.3 b) 0.7 c) 1.4 d) 0

a) {H, T} b) {1, 2} c) {Yes, No} d) {Win, Lose, Draw} Question 10. If the probability of raining tomorrow is 0.4, what is the probability that it will not rain? a) 0.2 b) 0.6 c) 0.4 d) 0.8 **Answer Key:** 1. a) 0 2. c) 1 3. b) A list of outcomes with their probabilities 4. c) 1 5. b) 1.25 6. c) 1 7. c) 1/6 8. a) 0.3 9. a) {H, T} 10.b) 0.6 Week 32 Question 1. If you flip a coin, which event is certain to happen? a) Getting a head b) Getting a tail c) Getting a number d) Getting a head or a tail Question 2. Which of the following is an impossible event when rolling a six-sided die? a) Rolling a 6 b) Rolling a 3 c) Rolling a 7 d) Rolling a 1

Question 9. Which of the following is a sample space for flipping a coin?

Question 3. When two events cannot both happen at the same time, they are called:

- a) Independent events
- b) Dependent events
- c) Mutually exclusive events
- d) Compound events

Question 4. If you draw a card from a standard deck, which event is more likely?

a) Drawing a heart

- b) Drawing a black card
- c) Drawing a joker
- d) Drawing a red card

Question 5. Two events that have no outcomes in common are called:

- a) Overlapping events
- b) Mutually exclusive events
- c) Independent events
- d) Dependent events

Question 6. If you roll a die and flip a coin, which of the following is a compound event?

- a) Rolling a 4
- b) Getting a tail
- c) Rolling a 4 and getting a tail
- d) Rolling a 2 or getting a head

Question 7. Which of the following is not a compound event?

- a) Drawing a red card and then a black card from a deck without replacement
- b) Rolling a 3 on a die
- c) Flipping two coins and getting two heads
- d) Spinning a spinner and landing on blue

Question 8. If two events do not affect each other's outcomes, they are:

- a) Mutually exclusive events
- b) Overlapping events
- c) Independent events
- d) Dependent events

Question 9. Which of the following is an example of dependent events?

- a) Rolling two dice at the same time
- b) Drawing two cards from a deck without replacement
- c) Flipping a coin and rolling a die
- d) Spinning two different spinners

Question 10. If the occurrence of one event affects the probability of another event, the two events are:

- a) Independent events
- b) Mutually exclusive events
- c) Overlapping events
- d) Dependent events

#### **Answer Key:**

- 1. d) Getting a head or a tail
- 2. c) Rolling a 7
- 3. c) Mutually exclusive events
- 4. d) Drawing a red card
- 5. b) Mutually exclusive events
- 6. c) Rolling a 4 and getting a tail

- 7. b) Rolling a 3 on a die
- 8. c) Independent events
- 9. b) Drawing two cards from a deck without replacement
- 10. d) Dependent events

#### Week 33

Question 1. What is the tool called that is used to measure angles?

- a) Ruler
- b) Compass
- c) Protractor
- d) Calculator

Question 2. How many degrees are in a complete circle?

- a) 90 degrees
- b) 180 degrees
- c) 270 degrees
- d) 360 degrees

Question 3. What type of angle measures exactly 90 degrees?

- a) Acute angle
- b) Right angle
- c) Obtuse angle
- d) Straight angle

Question 4. What type of angle measures less than 90 degrees?

- a) Acute angle
- b) Right angle
- c) Obtuse angle
- d) Straight angle

Question 5. What type of angle measures more than 90 degrees but less than 180 degrees?

- a) Acute angle
- b) Right angle
- c) Obtuse angle
- d) Straight angle

Question 6. What type of angle measures exactly 180 degrees?

- a) Acute angle
- b) Right angle
- c) Obtuse angle
- d) Straight angle

Question 7. When using a protractor, where should you place the vertex of the angle?

- a) At the center of the protractor
- b) At the edge of the protractor
- c) Anywhere on the protractor
- d) Outside the protractor

Question 8. When using a protractor, which scale should you use to measure an angle?
a) The scale that starts with 0
b) The scale that starts with 180
c) Either scale, depending on the angle
d) The scale that is closer to the angle

Question 9. What is the sum of the angles in a triangle?

- a) 90 degrees
- b) 180 degrees
- c) 270 degrees
- d) 360 degrees

Question 10. What is the sum of the angles in a quadrilateral?

- a) 90 degrees
- b) 180 degrees
- c) 270 degrees
- d) 360 degrees

## **Answer Key:**

- 1. c) Protractor
- 2. d) 360 degrees
- 3. b) Right angle
- 4. a) Acute angle
- 5. c) Obtuse angle
- 6. d) Straight angle
- 7. a) At the center of the protractor
- 8. c) Either scale, depending on the angle
- 9. b) 180 degrees
- 10. d) 360 degrees

#### Week 34

Question 1. What is the probability of an impossible event?

- a) 0
- b) 0.5
- c) 1
- d) 2

Question 2. What is the probability of a certain event?

- a) 0
- b) 0.5
- c) 1
- d) 2

Question 3. If two events are independent, does the outcome of one event affect the outcome of the other?

- a) Yes
- b) No

c) Sometimes d) Always	
Question 4. What is the probability of rolling a number greater than 4 on a standard 6-s die?  a) 1/3 b) 1/2 c) 2/3 d) 3/4	ided
Question 5. If you flip a coin, what is the probability of getting heads? a) 0 b) 0.5 c) 1 d) 2	
Question 6. In a compound event, what do you do to find the probability of both events happening?  a) Add the probabilities of the individual events b) Subtract the probabilities of the individual events c) Multiply the probabilities of the individual events d) Divide the probabilities of the individual events	
Question 7. What is the total probability of all possible outcomes in a probability experiment?  a) 0  b) 0.5  c) 1  d) 2	
Question 8. If two events are dependent, does the outcome of one event affect the outcome of the other?  a) Yes b) No c) Sometimes d) Always	come
Question 9. What is the probability of rolling an even number on a standard 6-sided die a) 1/3 b) 1/2 c) 2/3 d) 3/4	?
Question 10. If you have a bag with 3 red balls and 2 blue balls, what is the probability picking a red ball?  a) 1/5  b) 2/5  c) 3/5  d) 4/5	of

# **Answer Key:**

- 1. a) 0
- 2. c) 1
- 3. b) No
- 4. a) 1/3
- 5. b) 0.5
- 6. c) Multiply the probabilities of the individual events
- 7. c) 1
- 8. a) Yes
- 9. b) 1/2
- 10. c) 3/5

#### Week 35

Question 1. What is a compound event in probability?

- a) An event with only one outcome
- b) An event with two or more simple events
- c) An event that cannot happen
- d) An event that always happens

Question 2. What do you call the total number of possible outcomes in a probability experiment?

- a) Probability
- b) Sample space
- c) Compound event
- d) Outcome

Question 3. If two events are independent, the outcome of one event does not affect the outcome of the other event.

- a) True
- b) False
- c) Sometimes true
- d) Cannot be determined

Question 4. What is the probability of an impossible event?

- a) 0
- b) 1
- c) 0.5
- d) 100

Question 5. What is the probability of a certain event?

- a) 0
- b) 1
- c) 0.5
- d) 100

Question 6. If you are finding the probability of rolling a 3 on a die and then flipping a head on a coin, you are finding the probability of what kind of event?

- a) Independent
- b) Dependent
- c) Mutually exclusive
- d) Overlapping

Question 7. What is the probability of rolling a 3 on a die or flipping a head on a coin?

- a) P(3) + P(head)
- b) P(3) P(head)
- c) P(3) × P(head)
- d)  $P(3) \div P(head)$

Question 8. If two events are mutually exclusive, they cannot both occur at the same time.

- a) True
- b) False
- c) Sometimes true
- d) Cannot be determined

Question 9. If you have a bag with 3 red balls and 2 blue balls, what is the sample space for the color of a ball drawn at random?

- a) {red, blue}
- b) {red, red, red, blue, blue}
- c) {1, 2, 3, 4, 5}
- d) {3, 2}

Question 10. What do we call the ratio of the number of successful outcomes to the total number of possible outcomes?

- a) Ratio
- b) Fraction
- c) Probability
- d) Percentage

#### **Answer Key:**

- 1. b) An event with two or more simple events
- 2. b) Sample space
- 3. a) True
- 4. a) 0
- 5. b) 1
- 6. a) Independent
- 7. a) P(3) + P(head)
- 8. a) True
- 9. a) {red, blue}
- 10. c) Probability

# Week 36

Week 36
Question 1. When you multiply any number by 1, the result is: a) 0 b) 1 c) The number itself d) 10
Question 2. What is the result when you multiply a positive number by a negative number?  a) Positive b) Negative c) Zero d) Undefined
Question 3. When you divide a number by itself, the result is always: a) 0 b) 1 c) The number itself d) Undefined
Question 4. What is the result when you multiply two negative numbers?  a) Positive b) Negative c) Zero d) Undefined
Question 5. When you divide any number by 1, the result is: a) 0 b) 1 c) The number itself d) 10
Question 6. What is the result of multiplying any number by 0? a) 0 b) 1 c) The number itself d) Undefined
Question 7. When you divide a positive number by a negative number, the result is: a) Positive b) Negative c) Zero d) Undefined
Question 8. If you divide 0 by any number, the result is: a) 0 b) 1 c) The number itself d) Undefined

Question 9. When you multiply or divide two positive numbers, the result is:

- a) Positive
- b) Negative
- c) Zero
- d) Undefined

Question 10. What is the result of dividing any number by 0?

- a) 0
- b) 1
- c) The number itself
- d) Undefined

# **Answer Key**

- 1. c) The number itself
- 2. b) Negative
- 3. b) 1
- 4. a) Positive
- 5. c) The number itself
- 6. a) 0
- 7. b) Negative
- 8. a) 0
- 9. a) Positive
- 10. d) Undefined

Week 37

**Question 1.** Which of the following is an example of independent events?

- a) Drawing a card from a deck and then drawing another without replacing the first card.
- b) Rolling a die and flipping a coin.
- c) Choosing a red marble from a bag and then choosing a blue marble without replacing the red one.
- d) Drawing a face card from a deck and then drawing a number card without replacing the face card.

Question 2. If two events are independent, the probability of both events happening is:

- a) The sum of their individual probabilities.
- b) The difference of their individual probabilities.
- c) The product of their individual probabilities.
- d) Not related to their individual probabilities.

**Question 3.** Which of the following is an example of dependent events?

- a) Tossing two coins.
- b) Rolling two dice.
- c) Drawing two cards from a deck without replacement.
- d) Spinning a spinner twice.

**Question 4.** If the outcome of one event does not affect the outcome of another event, they are:

- a) Mutually exclusive.
- b) Dependent.
- c) Independent.
- d) Complementary.

**Question 5.** If you draw a red marble from a bag and then replace it before drawing a second marble, the two events are:

- a) Dependent.
- b) Independent.
- c) Mutually exclusive.
- d) Complementary.

**Question 6.** If two events are dependent, the probability of the second event:

- a) Remains the same.
- b) Changes based on the outcome of the first event.
- c) Is always 1.
- d) Is always 0.

**Question 7.** Which of the following is NOT an independent event?

- a) Drawing a card from a deck and rolling a die.
- b) Choosing a marble from a bag and then choosing another without replacement.
- c) Flipping a coin and spinning a spinner.
- d) Rolling two dice at the same time.

**Question 8.** If two events cannot happen at the same time, they are:

- a) Dependent.
- b) Independent.
- c) Mutually exclusive.
- d) Complementary.

**Question 9.** If you have a bag of 5 red marbles and 5 blue marbles, and you draw one of each color without replacing them, the events are:

- a) Independent.
- b) Dependent.
- c) Mutually exclusive.
- d) Complementary.

Question 10. Which of the following pairs of events are independent?

- a) Drawing two aces from a deck without replacement.
- b) Rolling a die and getting a 6, then rolling again and getting a 3.
- c) Choosing a red sock from a drawer, then choosing a blue sock without replacing the red one.
- d) Drawing a face card from a deck, then drawing a number card without replacement.

## **Answer Key**

1. b) Rolling a die and flipping a coin.

- 2. c) The product of their individual probabilities.
- 3. c) Drawing two cards from a deck without replacement.
- 4. c) Independent.
- 5. b) Independent.
- 6. b) Changes based on the outcome of the first event.
- 7. b) Choosing a marble from a bag and then choosing another without replacement.
- 8. c) Mutually exclusive.
- 9. b) Dependent.
- 10. b) Rolling a die and getting a 6, then rolling again and getting a 3.