2cool4school - Grade 8 Mathematics Worksheet

Q1 - Mathematics - Algebra Equations and Inequalities

Simplify the expression: 3x + 5x

1. 8x
2. 2x
3. 15x
4. 3x

Q2 - Mathematics - Algebra Equations and Inequalities

Simplify: 4m - 2n + 3m + n

1. 7m - n
2. 7m + n
3. m - n
4. 7m - 3n

Q3 - Mathematics - Algebra Equations and Inequalities

Evaluate the expression 2a - 3b when a = 4 and b = -2.

1. 8
2. 10
3. 14
4. -2

Q4 - Mathematics - Algebra Equations and Inequalities

Evaluate the expression 3x^2 - 2x + 1 when x = -1.

1. 6
2. 2
3. 0
4. -4

Q5 - Mathematics - Algebra Equations and Inequalities

Solve for x: 2(x - 3) = 4

1. 5
2. 3
3. 2
4. 4

Q6 - Mathematics - Algebra Equations and Inequalities

Solve the inequality: 3x - 4 > 5

1. x > 3
2. x > 1
3. x < 3
4. x < 1

Q7 - Mathematics - Algebra Equations and Inequalities

Solve for x: x/2 + 3 = 7

1. 8
2. 10
3. 4
4. 2

Q8 - Mathematics - Algebra Equations and Inequalities

Solve for y: 3y + 4 = 2y - 5

1. -1
2. 9
3. -9
4. 1

Q9 - Mathematics - Algebra Equations and Inequalities

Solve for x: 4(x - 2) = 12

1. 5
2. 4
3. 6
4. 3

Q10 - Mathematics - Algebra Equations and Inequalities

Solve for x: 5x - 7 = 18

1. -5
2. 3
3. 5
4. -3

Q11 - Mathematics - Algebra Equations and Inequalities

Solve for y: 5y + 3 = 2y + 12

1. 3
2. -3
3. 2
4. 5

Q12 - Mathematics - Algebra Equations and Inequalities

Which of the following represents an inequality?

1. x + 2 = 7
2. 3x - 5 > 10
3. y - 4 = 9
4. 2x + 3 = 8

Q13 - Mathematics - Algebra Equations and Inequalities

Factorize: x^2 - 9

1. (x - 3)(x + 3)
2. (x - 9)(x + 1)
3. (x - 1)(x + 9)
4. (x - 2)(x + 2)

Q14 - Mathematics - Algebra Equations and Inequalities

Solve: 3(x + 2) = 18

1. 4
2. 6
3. 8
4. 3

Q15 - Mathematics - Algebra Equations and Inequalities

What is the solution to the inequality 2x + 1 7?

1. x 3
2. x 3
3. x 4
4. x 4

Q16 - Mathematics - Operations Multiplication and Division

What is the product of 3/4 and 2?

1. 1/2
2. 1 1/2
3. 3/8
4. 3/2

Q17 - Mathematics - Operations Multiplication and Division

Divide 5 1/2 by 2. What is the result?

1. 2 3/4
2. 2 1/4
3. 3 1/4
4. 2 1/2

Q18 - Mathematics - Operations Multiplication and Division

Multiply 2/3 by 3/5. What is the product?

1. 6/15
2. 1/5
3. 1/2
4. 4/5

Q19 - Mathematics - Operations Multiplication and Division

What is the result of dividing -12 by 3?

1. -4
2. 4
3. -36
4. 36

Q20 - Mathematics - Operations Multiplication and Division

If 4 notebooks cost $12, how much does 1 notebook cost?

1. $2
2. $3
3. $4
4. $6

Q21 - Mathematics - Operations Multiplication and Division

What is the quotient of 144 12?

1. 10
2. 12
3. 14
4. 16

Q22 - Mathematics - Operations Multiplication and Division

If a rectangle's length is tripled, by what factor does its area increase?

1. 2
2. 3
3. 6
4. 9

Q23 - Mathematics - Operations Multiplication and Division

A car travels 240 miles in 4 hours. What is the average speed?

1. 40 mph
2. 50 mph
3. 60 mph
4. 70 mph

Q24 - Mathematics - Operations Multiplication and Division

Solve: (-8) (-7) = ?

1. -56
2. 56
3. -15
4. 15

Q25 - Mathematics - Operations Multiplication and Division

A pizza is cut into 8 slices. If you eat 3, what fraction of the pizza is left?

1. 3/8
2. 5/8
3. 1/3
4. 2/3

Q26 - Mathematics - Operations Multiplication and Division

If 5x = 35, what is the value of x?

1. 5
2. 6
3. 7
4. 8

Q27 - Mathematics - Operations Multiplication and Division

What is the value of 4?

1. 16
2. 64
3. 12
4. 81

Q28 - Mathematics - Operations Multiplication and Division

If a bag contains 6 red balls and 4 blue balls, what fraction are red?

1. 4/10
2. 6/10
3. 3/5
4. 2/5

Q29 - Mathematics - Operations Multiplication and Division

A store offers a 20% discount on a $50 item. What is the sale price?

1. $40
2. $45
3. $42
4. $38

Q30 - Mathematics - Operations Multiplication and Division

What is the reciprocal of 3/4?

1. 3/4
2. 4/3
3. 1/4
4. 1/3

Q31 - Mathematics - Scientific notation

What is the scientific notation for the number 5,000?

1. 5 x 10^3
2. 5 x 10^4
3. 5 x 10^2
4. 5 x 10^5

Q32 - Mathematics - Scientific notation

What is the result of multiplying 1.5 x 10^2 by 2 x 10^3 in scientific notation?

1. 3 x 10^6
2. 3 x 10^4
3. 3 x 10^5
4. 3 x 10^3

Q33 - Mathematics - Scientific notation

Convert 3.2 x 10^4 to standard notation.

1. 32000
2. 3200
3. 320000
4. 32

Q34 - Mathematics - Scientific notation

What is the scientific notation of 0.00056?

1. 5.6 x 10^-5
2. 5.6 x 10^-4
3. 5.6 x 10^4
4. 5.6 x 10^-3

Q35 - Mathematics - Scientific notation

Which of the following is equivalent to 7.5 x 10^-3?

1. 0.0075
2. 0.075
3. 0.00075
4. 75

Q36 - Mathematics - Scientific notation

Which of the following is the correct form of 0.0000321 in scientific notation?

1. 3.21 x 10^-6
2. 32.1 x 10^-6
3. 3.21 x 10^-5
4. 3.21 x 10^5

Q37 - Mathematics - Scientific notation

Add the numbers (4 x 10^2) and (3 x 10^2) in scientific notation.

1. 7 x 10^2
2. 7 x 10^4
3. 7 x 10^3
4. 7 x 10^1

Q38 - Mathematics - Scientific notation

Which of these is the correct way to express 0.0000045 in scientific notation?

1. 45 x 10^-7
2. 4.5 x 10^-6
3. 45 x 10^6
4. 4.5 x 10^-5

Q39 - Mathematics - Scientific notation

Subtract (2.5 x 10^3) from (5 x 10^3) and express the result in scientific notation.

1. 2.5 x 10^3
2. 7.5 x 10^3
3. 2.5 x 10^2
4. 7.5 x 10^2

Q40 - Mathematics - Scientific notation

Which of these is equivalent to 3.0 x 10^5 in standard form?

1. 3000000
2. 30000
3. 300000
4. 300

Q41 - Mathematics - Scientific notation

Convert 8 x 10^-3 into standard notation.

1. 8
2. 0.008
3. 0.0008
4. 8 x 10^3

Q42 - Mathematics - Scientific notation

Convert 4.8 x 10^7 to standard form.

1. 48000000
2. 4800000
3. 480000
4. 48000

Q43 - Mathematics - Scientific notation

What is the sum of (2 x 10^3) and (5 x 10^3) in scientific notation?

1. 7 x 10^3
2. 7 x 10^4
3. 7 x 10^2
4. 7 x 10^1

Q44 - Mathematics - Scientific notation

Multiply (3 x 10^2) by (2 x 10^3) and express the product in scientific notation.

1. 6 x 10^6
2. 6 x 10^5
3. 5 x 10^5
4. 5 x 10^6

Q45 - Mathematics - Scientific notation

Divide (6 x 10^5) by (2 x 10^2) and express the quotient in scientific notation.

1. 3 x 10^2
2. 3 x 10^3
3. 3 x 10^4
4. 3 x 10^5

Q46 - Mathematics - Operations Addition and Subtraction

What is the result of adding -5 and 7?

1. 2
2. -2
3. 12
4. -12

Q47 - Mathematics - Operations Addition and Subtraction

Subtract: 9/10 - 2/5

1. 3/10
2. 7/10
3. 5/10
4. 4/10

Q48 - Mathematics - Operations Addition and Subtraction

Subtract: 3/4 - 1/2

1. 1/4
2. 1/2
3. 1/3
4. 1/5

Q49 - Mathematics - Operations Addition and Subtraction

Calculate: -8 + (-3)

1. -11
2. -5
3. 5
4. 11

Q50 - Mathematics - Operations Addition and Subtraction

What is the sum of -15 and -8?

1. -5
2. 7
3. -23
4. 23

Q51 - Mathematics - Operations Addition and Subtraction

Calculate: -20 + 14

1. -6
2. 6
3. -34
4. 34

Q52 - Mathematics - Operations Addition and Subtraction

Calculate: -9 + 4

1. -13
2. 5
3. -5
4. 13

Q53 - Mathematics - Operations Addition and Subtraction

What is the sum of -12 and 15?

1. -3
2. 3
3. 27
4. -27

Q54 - Mathematics - Operations Addition and Subtraction

Add: 2/5 + 3/10

1. 1/2
2. 7/10
3. 5/10
4. 6/10

Q55 - Mathematics - Operations Addition and Subtraction

What is 2 1/4 + 3 3/4?

1. 6
2. 5 1/2
3. 5
4. 6 1/2

Q56 - Mathematics - Operations Addition and Subtraction

Subtract: 7 - (-3)

1. 10
2. -10
3. 4
4. -4

Q57 - Mathematics - Operations Addition and Subtraction

Subtract: 3/4 - 1/2

1. 1/4
2. 1/2
3. 1/3
4. 1/5

Q58 - Mathematics - Operations Addition and Subtraction

What is 5/6 + 1/3?

1. 6/6

2. 7/6
3. 5/6
4. 8/6

Q59 - Mathematics - Operations Addition and Subtraction

Simplify: -7 - (-2)

1. -9
2. -5
3. 5
4. 9

Q60 - Mathematics - Operations Addition and Subtraction

Subtract: 7/8 - 1/4

1. 3/8
2. 6/8
3. 5/8
4. 4/8

Q61 - Mathematics - Operations Properties and Relationships

Simplify the expression: 3 + 5 2 - 4 2

1. 14
2. 10
3. 12
4. 16

Q62 - Mathematics - Operations Properties and Relationships

Solve for x: 4x - 7 = 9

1. 4
2. 2
3. 3
4. 5

Q63 - Mathematics - Operations Properties and Relationships

What is the value of 2/3 divided by 4/5?

1. 5/6
2. 8/15
3. 10/12
4. 3/4

Q64 - Mathematics - Operations Properties and Relationships

If a car travels 150 miles in 3 hours, what is its average speed in miles per hour?

1. 50
2. 45
3. 55
4. 60

Q65 - Mathematics - Operations Properties and Relationships

Simplify: (2^3 5) (4 - 2)

1. 20
2. 40
3. 10
4. 30

Q66 - Mathematics - Operations Properties and Relationships

What is 25% of 200?

1. 50
2. 25
3. 75
4. 100

Q67 - Mathematics - Operations Properties and Relationships

Solve: 7/8 - 1/4

1. 5/8
2. 3/4
3. 1/2
4. 7/12

Q68 - Mathematics - Operations Properties and Relationships

What is the value of (6 + 4) 2 3?

1. 15
2. 30
3. 10
4. 9

Q69 - Mathematics - Operations Properties and Relationships

The product of two numbers is 24. One number is 8. What is the other number?

1. 3
2. 4
3. 6
4. 5

Q70 - Mathematics - Operations Properties and Relationships

Which property justifies: 7 + (3 + 5) = (7 + 3) + 5?

1. Commutative Property
2. Associative Property
3. Distributive Property
4. Identity Property

Q71 - Mathematics - Operations Properties and Relationships

If 3/5 of a number is 18, what is the number?

1. 20
2. 25
3. 30
4. 40

Q72 - Mathematics - Operations Properties and Relationships

What is the multiplicative inverse of 4/7?

1. 4/7
2. 4/7
3. -4/7
4. -7/4

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Q73 - Mathematics - Operations Properties and Relationships

Solve: 5^2 - 3 4

1. 13
2. 25
3. 19
4. 7

Q74 - Mathematics - Operations Properties and Relationships

If a number is increased by 40% of itself, the new value is 70. What is the original number?

1. 50
2. 60
3. 40
4. 45

Q75 - Mathematics - Operations Properties and Relationships

Solve for x: 4x - 7 = 9

1. 4
2. 2
3. 3
4. 5

Q76 - Mathematics - Operations Mental Math

What is 35 + 47?

1. 72
2. 75
3. 80
4. 85

Q77 - Mathematics - Operations Mental Math

What is the sum of -6 and -9?

1. 15
2. -15
3. 3

4. -3

Q78 - Mathematics - Operations Mental Math

What is 89 - 56?

1. 33
2. 34
3. 35
4. 36

Q79 - Mathematics - Operations Mental Math

What is 6 9?

1. 54
2. 56
3. 58
4. 60

Q80 - Mathematics - Operations Mental Math

What is the product of -4 and 7?

1. 28
2. -28
3. -11
4. 11

Q81 - Mathematics - Operations Mental Math

What is 144 12?

1. 10
2. 11
3. 12
4. 13

Q82 - Mathematics - Operations Mental Math

What is the square of 7?

1. 49

2. 50
3. 51
4. 52

Q83 - Mathematics - Operations Mental Math

What is the cube of 2?

1. 4
2. 6
3. 8
4. 10

Q84 - Mathematics - Operations Mental Math

What is 12 - (-6)?

1. 6
2. 18
3. 20
4. 12

Q85 - Mathematics - Operations Mental Math

What is the square root of 81?

1. 9
2. 10
3. 11
4. 12

Q86 - Mathematics - Operations Mental Math

What is the cube root of 64?

1. 3
2. 4
3. 5
4. 6

Q87 - Mathematics - Operations Mental Math

What is 8 + (-13)?

1. -5
2. 5
3. 21
4. -21

Q88 - Mathematics - Operations Mental Math

What is 14 + (-9)?

1. -5
2. 5
3. 23
4. -23

Q89 - Mathematics - Operations Mental Math

What is -3 - 5?

1. -8
2. 8
3. -5
4. 5

Q90 - Mathematics - Operations Mental Math

What is 25 + (-18)?

1. 7
2. -7
3. 43
4. -43

Q91 - Mathematics - Operations Mental Math

What is 35 + 47?

1. 72
2. 75
3. 80
4. 85

Q92 - Mathematics - Operations Mental Math

What is the sum of -6 and -9?

1. 15
2. -15
3. 3
4. -3

Q93 - Mathematics - Operations Mental Math

What is 89 - 56?

1. 33
2. 34
3. 35
4. 36

Q94 - Mathematics - Operations Mental Math

What is 6 9?

1. 54
2. 56
3. 58
4. 60

Q95 - Mathematics - Operations Mental Math

What is 144 12?

1. 10
2. 11
3. 12
4. 13

Q96 - Mathematics - Operations Mental Math

What is the product of -4 and 7?

1. 28
2. -28
3. -11
4. 11

Q97 - Mathematics - Operations Mental Math

What is the square of 7?

1. 49
2. 50
3. 51
4. 52

Q98 - Mathematics - Operations Mental Math

What is 12 - (-6)?

1. 6
2. 18
3. 20
4. 12

Q99 - Mathematics - Operations Mental Math

What is the cube of 2?

1. 4
2. 6
3. 8
4. 10

Q100 - Mathematics - Operations Mental Math

What is the square root of 81?

1. 9
2. 10
3. 11
4. 12

Q101 - Mathematics - Operations Mental Math

What is the cube root of 64?

1. 3
2. 4
3. 5

4. 6

Q102 - Mathematics - Operations Mental Math

What is 8 + (-13)?

1. -5
2. 5
3. 21
4. -21

Q103 - Mathematics - Operations Mental Math

What is 14 + (-9)?

1. -5
2. 5
3. 23
4. -23

Q104 - Mathematics - Operations Mental Math

What is -3 - 5?

1. -8
2. 8
3. -5
4. 5

Q105 - Mathematics - Operations Mental Math

What is 25 + (-18)?

1. 7
2. -7
3. 43
4. -43

Q106 - Mathematics - Data Probability

What is the probability of rolling a sum of 7 with two six-sided dice?

1. 1/6

2. 1/12
3. 1/36
4. 1/3

Q107 - Mathematics - Data Probability

If a coin is flipped three times, what is the probability of getting exactly two heads?

1. 1/8
2. 3/8
3. 1/2
4. 1/4

Q108 - Mathematics - Data Probability

A bag contains 5 red, 3 blue, and 2 green marbles. What is the probability of randomly selecting a blue marble?

1. 1/5
2. 3/10
3. 1/3
4. 3/5

Q109 - Mathematics - Data Probability

In a standard deck of 52 cards, what is the probability of drawing an Ace or a King?

1. 2/13
2. 1/13
3. 4/13
4. 1/4

Q110 - Mathematics - Data Probability

What is the probability of drawing a red card from a standard deck of 52 cards?

1. 1/2
2. 1/4
3. 1/3
4. 3/4

Q111 - Mathematics - Data Probability

If two events are independent, what is the probability of both occurring?

1. Sum of probabilities
2. Product of probabilities
3. Difference of probabilities
4. Quotient of probabilities

Q112 - Mathematics - Data Probability

A spinner is divided into 4 equal sections numbered 1 to 4. What is the probability of spinning an even number?

1. 1/4
2. 1/2
3. 3/4
4. 1

Q113 - Mathematics - Data Probability

In a class of 20 students, 12 are girls. If a student is selected at random, what is the probability of selecting a boy?

1. 2/5
2. 3/5
3. 1/3
4. 1/2

Q114 - Mathematics - Data Probability

A jar contains 10 candies: 4 cherry, 3 lemon, and 3 orange. What is the probability of picking a lemon candy?

1. 1/2
2. 1/3
3. 3/10
4. 1/4

Q115 - Mathematics - Data Probability

What is the probability of selecting a vowel when choosing a letter from the word 'MATH'?

1. 1/4

2. 1/2
3. 1/3
4. 1/5

Q116 - Mathematics - Data Probability

A bag contains 4 red, 6 blue, and 10 green balls. What is the probability of picking a red ball?

1. 1/5
2. 1/4
3. 2/5
4. 3/10

Q117 - Mathematics - Data Probability

If a fair die is rolled, what is the probability of rolling a number greater than 4?

1. 1/3
2. 1/2
3. 1/6
4. 5/6

Q118 - Mathematics - Data Probability

A number is chosen randomly from 1 to 10. What is the probability that it is a prime number?

1. 2/5
2. 3/5
3. 4/5
4. 2/3

Q119 - Mathematics - Data Probability

A jar contains 3 red, 5 blue, and 7 yellow candies. What is the probability of picking a blue candy?

1. 1/4
2. 5/15
3. 1/3
4. 7/15

Q120 - Mathematics - Data Probability

If you randomly select a day of the week, what is the probability that it starts with 'S'?

1. 1/7
2. 2/7
3. 3/7
4. 4/7

Q121 - Mathematics - Number Theory and Arithmetic

What is the greatest common factor (GCF) of 24 and 36?

1. 6
2. 8
3. 12
4. 18

Q122 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is a prime number?

1. 15
2. 21
3. 29
4. 39

Q123 - Mathematics - Number Theory and Arithmetic

What is the least common multiple (LCM) of 5 and 7?

1. 12
2. 35
3. 40
4. 70

Q124 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is divisible by 3?

1. 124
2. 135
3. 146
4. 157

Q125 - Mathematics - Number Theory and Arithmetic

What is the prime factorization of 60?

1. 2 2 3 5
2. 2 3 5
3. 3 4 5
4. 2 2 2 5

Q126 - Mathematics - Number Theory and Arithmetic

Which of the following is a composite number?

1. 2
2. 3
3. 5
4. 9

Q127 - Mathematics - Number Theory and Arithmetic

What is the GCF of 14 and 49?

1. 7
2. 14
3. 21
4. 28

Q128 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is neither prime nor composite?

1. 0
2. 1
3. 2
4. 3

Q129 - Mathematics - Number Theory and Arithmetic

What is the LCM of 4 and 10?

1. 10
2. 20
3. 30
4. 40

Q130 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is a factor of 36?

1. 5
2. 6
3. 7
4. 8

Q131 - Mathematics - Number Theory and Arithmetic

What is the prime factorization of 45?

1. 3 3 5
2. 3 5
3. 5 9
4. 3 3 3

Q132 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is a multiple of 8?

1. 14
2. 24
3. 34
4. 44

Q133 - Mathematics - Number Theory and Arithmetic

What is the GCF of 18 and 24?

1. 2
2. 3
3. 6
4. 12

Q134 - Mathematics - Number Theory and Arithmetic

Which of the following numbers is a prime number?

1. 27
2. 31
3. 33

4. 35

Q135 - Mathematics - Number Theory and Arithmetic

What is the least common multiple of 6 and 9?

1. 18
2. 36
3. 42
4. 54

Q136 - Mathematics - Proportional Relationships

If 5 apples cost $10, what is the cost of 8 apples at the same rate?

1. $15
2. $16
3. $18
4. $20

Q137 - Mathematics - Proportional Relationships

A car travels 180 miles in 3 hours. What is the unit rate in miles per hour?

1. 50 mph
2. 55 mph
3. 60 mph
4. 65 mph

Q138 - Mathematics - Proportional Relationships

Which of the following ratios is equivalent to 3:4?

1. 6:8
2. 9:12
3. 12:16
4. All of the above

Q139 - Mathematics - Proportional Relationships

If y is directly proportional to x, and y = 10 when x = 2, what is the value of y when x = 5?

1. 20

2. 25
3. 30
4. 35

Q140 - Mathematics - Proportional Relationships

A recipe requires 2 cups of sugar for every 5 cups of flour. How many cups of sugar are needed for 15 cups of flour?

1. 5
2. 6
3. 7
4. 8

Q141 - Mathematics - Proportional Relationships

Which graph represents a proportional relationship?

1. A straight line that passes through the origin
2. A straight line that does not pass through the origin
3. A curved line
4. A horizontal line

Q142 - Mathematics - Proportional Relationships

If 7 notebooks cost $21, how much do 10 notebooks cost at the same rate?

1. $25
2. $28
3. $30
4. $35

Q143 - Mathematics - Proportional Relationships

A map has a scale of 1 inch to 50 miles. If two cities are 3 inches apart on the map, what is the actual distance between them?

1. 100 miles
2. 125 miles
3. 150 miles
4. 175 miles

Q144 - Mathematics - Proportional Relationships

Which equation represents a proportional relationship between x and y?

1. y = 2x + 3
2. y = 3x
3. y = x^2
4. y = x + 5

Q145 - Mathematics - Proportional Relationships

If a car uses 4 gallons of gas to travel 120 miles, how many gallons are needed to travel 180 miles?

1. 5
2. 6
3. 7
4. 8

Q146 - Mathematics - Proportional Relationships

A store sells 3 shirts for $45. What is the price per shirt?

1. $10
2. $12
3. $15
4. $18

Q147 - Mathematics - Proportional Relationships

If two variables have a proportional relationship, what is their constant of proportionality?

1. The sum of the variables
2. The difference of the variables
3. The product of the variables
4. The ratio of the variables

Q148 - Mathematics - Proportional Relationships

A recipe calls for 4 cups of water for every 3 cups of rice. How many cups of water are needed for 9 cups of rice?

1. 10
2. 11

3. 12
4. 13

Q149 - Mathematics - Proportional Relationships

A rope 8 meters long is cut into pieces in a ratio of 1:3. How long is the shorter piece?

1. 2 meters
2. 3 meters
3. 4 meters
4. 5 meters

Q150 - Mathematics - Proportional Relationships

If a worker earns $120 for 8 hours of work, how much will they earn for 12 hours at the same rate?

1. $150
2. $160
3. $180
4. $200

Q151 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

Which of the following shapes can tessellate a plane without any gaps or overlaps?

1. Circle
2. Regular pentagon
3. Regular hexagon
4. Regular heptagon

Q152 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

What transformation is applied when a shape is flipped over a line to produce a mirror image?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q153 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

If a scale drawing has a scale of 1:50, what is the actual length of an object that measures 2 cm on the drawing?

1. 25 cm
2. 50 cm
3. 100 cm
4. 200 cm

Q154 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

Which transformation involves turning a figure around a fixed point?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q155 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

In a tessellation, which regular polygon cannot be used to cover a plane without gaps or overlaps?

1. Equilateral triangle
2. Square
3. Regular pentagon
4. Regular hexagon

Q156 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

What is the result of enlarging a shape by a scale factor of 3?

1. The shape's area is tripled.
2. The shape's perimeter is tripled.
3. The shape's dimensions are tripled.
4. The shape's volume is tripled.

Q157 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

Which transformation changes the size of a figure but not its shape?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q158 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

If a figure is rotated 90 degrees clockwise around the origin on a Cartesian plane, what happens to the coordinates of a point (x, y)?

1. (-y, x)
2. (y, -x)
3. (-x, -y)
4. (x, y)

Q159 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

What is the term for a transformation that slides a figure a certain distance in a given direction?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q160 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

In a scale drawing with a scale of 1:100, what is the length on the drawing of an object that is 500 cm in reality?

1. 0.5 cm
2. 5 cm
3. 50 cm
4. 500 cm

Q161 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

Which of the following transformations does not change the orientation of a figure?

1. Reflection
2. Rotation
3. Translation
4. Dilation

Q162 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

If a shape is reflected over the y-axis, what happens to the coordinates of a point (x, y)?

1. (x, -y)
2. (-x, y)

3. (x, y)
4. (-y, x)

Q163 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

What is the term for a pattern that covers a plane with no gaps or overlaps using one or more geometric shapes?

1. Transformation
2. Tessellation
3. Dilation
4. Rotation

Q164 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

If a figure undergoes a dilation with a scale factor less than 1, what happens to the figure?

1. It becomes larger.
2. It becomes smaller.
3. It remains the same size.
4. It changes shape.

Q165 - Mathematics - Spatial Sense Geometric and Spatial Reasoning

Which transformation involves resizing a figure while maintaining its shape and proportions?

1. Translation
2. Rotation
3. Dilation
4. Reflection

Q166 - Mathematics - Data Data Literacy

Which of the following is an example of one-variable data?

1. Height measurements of students in a class
2. Height and weight measurements of students in a class
3. Test scores of students across different subjects
4. Temperature and humidity readings over a week

Q167 - Mathematics - Data Data Literacy

When is it appropriate to use two-variable data?

1. When analyzing the relationship between two different variables
2. When collecting data on a single characteristic
3. When data is qualitative
4. When data is discrete

Q168 - Mathematics - Data Data Literacy

Which type of graph is best suited for displaying the relationship between two continuous variables?

1. Bar graph
2. Pie chart
3. Scatter plot
4. Histogram

Q169 - Mathematics - Data Data Literacy

What is the primary purpose of creating an infographic about a data set?

1. To display data in tables
2. To represent data in a visually appealing way and tell a story
3. To list data points
4. To perform complex statistical analysis

Q170 - Mathematics - Data Data Literacy

Which term describes a relationship where, as one variable increases, the other variable also increases?

1. Negative correlation
2. No correlation
3. Positive correlation
4. Inverse correlation

Q171 - Mathematics - Data Data Literacy

What does a strong positive correlation indicate about two variables?

1. As one variable increases, the other decreases
2. There is no relationship between the variables
3. As one variable increases, the other increases significantly
4. The variables are inversely related

Q172 - Mathematics - Data Data Literacy

Which of the following is an example of misleading data visualization?

1. Using a consistent scale on a bar graph
2. Starting the y-axis at a value other than zero to exaggerate differences
3. Labeling all axes and data points clearly
4. Using appropriate graph types for the data

Q173 - Mathematics - Data Data Literacy

What is the role of outliers in data analysis?

1. They always indicate errors in data collection
2. They have no impact on data analysis
3. They can significantly affect the results and interpretations
4. They should always be removed from the data set

Q174 - Mathematics - Data Data Literacy

Which measure of central tendency is most affected by outliers?

1. Mean
2. Median
3. Mode
4. Range

Q175 - Mathematics - Data Data Literacy

When analyzing a scatter plot, what does a trend line represent?

1. A line connecting all data points
2. The overall pattern or trend in the data
3. A randomly drawn line
4. A calculation of the mean

Q176 - Mathematics - Data Data Literacy

What is the best way to summarize a large set of numerical data?

1. Listing each data point separately
2. Using a histogram or frequency table
3. Using a bar graph

4. Summarizing data using a box plot

Q177 - Mathematics - Data Data Literacy

How can data bias be reduced when conducting a survey?

1. Only surveying a specific group of people
2. Ensuring a diverse and representative sample
3. Surveying only people who agree with the topic
4. Making survey questions leading

Q178 - Mathematics - Data Data Literacy

Which type of data is best represented using a histogram?

1. Categorical data
2. Quantitative continuous data
3. Ordinal data
4. Binary data

Q179 - Mathematics - Data Data Literacy

Why is it important to understand the scale on a graph?

1. It is not important
2. To make the graph more colorful
3. To manipulate the data representation
4. To accurately interpret the information

Q180 - Mathematics - Data Data Literacy

Which type of data would best be analyzed using a box plot?

1. A single observation
2. A single data point
3. Multiple groups of data
4. A dataset with extreme values

Q181 - Mathematics - Algebra Mathematical Modelling

What is the first step in creating a mathematical model for a real-life situation?

1. Identifying the variables involved

2. Collecting data
3. Defining the problem
4. Formulating equations

Q182 - Mathematics - Algebra Mathematical Modelling

Which of the following is a common method for collecting data in mathematical modelling?

1. Surveys
2. Random sampling
3. Observations
4. All of the above

Q183 - Mathematics - Algebra Mathematical Modelling

What does a mathematical model represent?

1. A real-world situation
2. A set of equations
3. A computer simulation
4. A theoretical concept

Q184 - Mathematics - Algebra Mathematical Modelling

Which of the following is NOT a type of mathematical model?

1. Linear models
2. Nonlinear models
3. Exponential models
4. Random models

Q185 - Mathematics - Algebra Mathematical Modelling

In algebraic modelling, what is a constraint?

1. A type of equation
2. A condition that limits the possible solutions
3. A variable
4. A method of graphing

Q186 - Mathematics - Algebra Mathematical Modelling

In mathematical modelling, what is the purpose of defining variables?

1. To represent unknown quantities
2. To simplify equations
3. To collect data
4. To make predictions

Q187 - Mathematics - Algebra Mathematical Modelling

In mathematical modelling, what is the role of assumptions?

1. To simplify the model
2. To make the model more accurate
3. To collect data
4. To define variables

Q188 - Mathematics - Algebra Mathematical Modelling

What type of model is often used to predict population growth?

1. Linear model
2. Nonlinear model
3. Exponential model
4. Random model

Q189 - Mathematics - Algebra Mathematical Modelling

What does a system of equations in a mathematical model represent?

1. A set of linear relationships
2. A set of inequalities
3. A set of exponential relationships
4. A set of quadratic equations

Q190 - Mathematics - Algebra Mathematical Modelling

What is a solution to an inequality?

1. A value that satisfies the equation
2. A set of values that satisfy the inequality
3. A solution to a system of equations
4. A constant value

Q191 - Mathematics - Algebra Mathematical Modelling

In algebraic modelling, what is the significance of a constant term?

1. It represents a fixed value
2. It represents a changing value
3. It defines the variable
4. It makes the equation more complex

Q192 - Mathematics - Algebra Mathematical Modelling

In mathematical modelling, what is the role of solving equations?

1. To find the values of unknown variables
2. To represent a situation
3. To make assumptions
4. To collect data

Q193 - Mathematics - Algebra Mathematical Modelling

What does an inequality represent in a mathematical model?

1. An exact solution
2. A range of possible values
3. A relationship between two variables
4. A set of linear equations

Q194 - Mathematics - Algebra Mathematical Modelling

Which of the following is true about a mathematical model?

1. It helps to simplify real-world problems
2. It always gives an exact solution
3. It is always a linear equation
4. It cannot be used to make predictions

Q195 - Mathematics - Algebra Mathematical Modelling

What is the purpose of graphing a mathematical model?

1. To simplify the equation
2. To visualize the relationships between variables
3. To define the variables
4. To make predictions

Q196 - Mathematics - Algebra Patterns and Relationships

What is the next number in the pattern: 5, 10, 15, 20, ...?

1. 20
2. 15
3. 25
4. 30

Q197 - Mathematics - Algebra Patterns and Relationships

Which algebraic expression represents the nth term of the pattern: 3, 6, 9, 12, ...?

1. 3n + 3
2. n + 3
3. n - 3
4. 3n

Q198 - Mathematics - Algebra Patterns and Relationships

If the pattern is defined by the equation y = 2x + 1, what is the value of y when x = 4?

1. 9
2. 8
3. 10
4. 7

Q199 - Mathematics - Algebra Patterns and Relationships

In the sequence: 2, 5, 10, 17, ..., what is the 5th term?

1. 29
2. 25
3. 26
4. 28

Q200 - Mathematics - Algebra Patterns and Relationships

In the sequence: 5, 8, 11, 14, ..., what is the 20th term?

1. 60
2. 62
3. 61

4. 63

Q201 - Mathematics - Algebra Patterns and Relationships

Which of the following represents a linear relationship?

1. y = 2^x
2. y = x^2 + 1
3. y = 3x + 2
4. y = 1/x

Q202 - Mathematics - Algebra Patterns and Relationships

Which equation represents the relationship between x and y if the pattern is: (1, 3), (2, 5), (3, 7), (4, 9)?

1. y = 2x + 1
2. y = 2x - 1
3. y = 3x - 1
4. y = x + 2

Q203 - Mathematics - Algebra Patterns and Relationships

What is the common difference in the arithmetic sequence: 7, 12, 17, 22, ...?

1. 6
2. 7
3. 5
4. 4

Q204 - Mathematics - Algebra Patterns and Relationships

If a pattern starts with 4 and each term is multiplied by 3 to get the next term, what is the 4th term?

1. 36
2. 81
3. 108
4. 64

Q205 - Mathematics - Algebra Patterns and Relationships

Which graph represents a linear pattern?

1. An exponential curve
2. A straight line
3. A parabola
4. A hyperbola

Q206 - Mathematics - Algebra Patterns and Relationships

What is the 10th term of the sequence defined by the expression 5n - 2?

1. 52
2. 47
3. 48
4. 50

Q207 - Mathematics - Algebra Patterns and Relationships

In the pattern: 1, 4, 9, 16, ..., what is the 6th term?

1. 36
2. 30
3. 49
4. 25

Q208 - Mathematics - Algebra Patterns and Relationships

If a sequence is defined recursively by a_1 = 2 and a_n = a_(n-1) + 3, what is the 5th term?

1. 13
2. 14
3. 11
4. 12

Q209 - Mathematics - Algebra Patterns and Relationships

Which of the following sequences is geometric?

1. 5, 10, 15, 20
2. 1, 4, 9, 16
3. 3, 6, 9, 12
4. 2, 4, 8, 16

Q210 - Mathematics - Algebra Patterns and Relationships

What is the slope of the line represented by the equation y = -3x + 7?

1. 7
2. -3
3. -7
4. 3

Q211 - Mathematics - Financial Literacy

What is the purpose of comparing exchange rates when converting foreign currency?

1. To determine the amount of foreign currency received for one unit of domestic currency.
2. To find the best time to travel abroad.
3. To understand foreign cultures better.
4. To calculate taxes on international purchases.

Q212 - Mathematics - Financial Literacy

How do you calculate the unit price of an item?

1. Add the total price to the number of units.
2. Divide the total price by the number of units.
3. Subtract the number of units from the total price.
4. Multiply the total price by the number of units.

Q213 - Mathematics - Financial Literacy

If an item costs $50 and is subject to a 10% sales tax, what is the total cost?

1. $60
2. $50.10
3. $55
4. $45

Q214 - Mathematics - Financial Literacy

A store offers a 20% discount on a $40 item. How much do you pay after the discount?

1. $32
2. $36
3. $28
4. $30

Q215 - Mathematics - Financial Literacy

How much tip would you leave on a $25 bill if you want to tip 15%?

1. $2.50
2. $3.75
3. $4.00
4. $5.00

Q216 - Mathematics - Financial Literacy

What is the main difference between simple and compound interest?

1. Simple interest is calculated on the principal and accumulated interest, while compound interest is calcu
2. Simple interest rates are always higher than compound interest rates.
3. Simple interest is calculated only on the principal amount, while compound interest is calculated on the
4. Compound interest is only used for loans, while simple interest is used for savings.

Q217 - Mathematics - Financial Literacy

If you invest $1,000 at an annual simple interest rate of 5%, how much interest will you earn in 3 years?

1. $150
2. $100
3. $50
4. $200

Q218 - Mathematics - Financial Literacy

Which of the following best describes 'net income'?

1. Income after all taxes and deductions have been subtracted.
2. Income from investments only.
3. Income from a second job.
4. Total income before any deductions.

Q219 - Mathematics - Financial Literacy

What is a budget?

1. A summary of investment portfolios.
2. A record of past expenditures.

3. A plan for managing income and expenses.
4. A list of debts owed.

Q220 - Mathematics - Financial Literacy

Why is it important to have an emergency fund?

1. To lend money to friends.
2. To spend on luxury items.
3. To invest in high-risk stocks.
4. To cover unexpected expenses without going into debt.

Q221 - Mathematics - Financial Literacy

If a country's currency depreciates, what is the likely effect on its imports?

1. Imports are banned.
2. Imports become cheaper.
3. Imports become more expensive.
4. No change in import prices.

Q222 - Mathematics - Financial Literacy

What does APR stand for in financial terms?

1. Annual Payment Rate
2. Annual Penalty Rate
3. Annual Principal Rate
4. Annual Percentage Rate

Q223 - Mathematics - Financial Literacy

What is the benefit of saving money in a high-interest savings account?

1. Earning more interest over time.
2. Avoiding financial penalties.
3. Spending more freely.
4. Increasing spending ability.

Q224 - Mathematics - Financial Literacy

What is an example of a fixed expense in a budget?

1. Entertainment
2. Dining out
3. Groceries
4. Rent

Q225 - Mathematics - Financial Literacy

Why is it important to check a credit report regularly?

1. To detect fraud or errors.
2. To apply for more loans.
3. To prevent identity theft.
4. To monitor financial history.

Q226 - Mathematics - Pythagorean Theorem

In a right-angled triangle, if one leg is 3 units and the other leg is 4 units, what is the length of the hypotenuse?

1. 6 units
2. 7 units
3. 5 units
4. 8 units

Q227 - Mathematics - Pythagorean Theorem

A right-angled triangle has a hypotenuse of 13 units and one leg of 5 units. What is the length of the other leg?

1. 10 units
2. 9 units
3. 8 units
4. 12 units

Q228 - Mathematics - Pythagorean Theorem

Which set of side lengths forms a right-angled triangle?

1. 8, 15, 17
2. 7, 24, 25
3. 9, 12, 15
4. 5, 12, 13

Q229 - Mathematics - Pythagorean Theorem

If the legs of a right-angled triangle are both 5 units, what is the length of the hypotenuse?

1. 5 units
2. 53 units
3. 52 units
4. 10 units

Q230 - Mathematics - Pythagorean Theorem

A ladder leans against a wall, reaching a height of 12 feet. The base of the ladder is 5 feet from the wall. How long is the ladder?

1. 13 feet
2. 15 feet
3. 12 feet
4. 14 feet

Q231 - Mathematics - Pythagorean Theorem

The diagonal of a square measures 102 units. What is the length of each side of the square?

1. 10 units
2. 20 units
3. 15 units
4. 5 units

Q232 - Mathematics - Pythagorean Theorem

Which of the following is a Pythagorean triple?

1. 5, 12, 13
2. 10, 24, 26
3. 9, 12, 15
4. All of the above

Q233 - Mathematics - Pythagorean Theorem

In a right-angled triangle, the hypotenuse is 10 units, and one leg is 6 units. What is the length of the other leg?

1. 5 units

2. 8 units
3. 7 units
4. 9 units

Q234 - Mathematics - Pythagorean Theorem

A rectangle has a length of 9 units and a width of 12 units. What is the length of its diagonal?

1. 13 units
2. 16 units
3. 15 units
4. 14 units

Q235 - Mathematics - Pythagorean Theorem

If a triangle has sides of lengths 8 units, 15 units, and 17 units, is it a right-angled triangle?

1. No
2. Yes
3. Only if 8 and 15 are the legs
4. Cannot be determined

Q236 - Mathematics - Pythagorean Theorem

The sides of a right-angled triangle are in the ratio 3:4:5. If the hypotenuse is 20 units, what is the length of the shortest side?

1. 15 units
2. 12 units
3. 16 units
4. 9 units

Q237 - Mathematics - Pythagorean Theorem

Which theorem states that in a right-angled triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides?

1. Pythagorean Theorem
2. Triangle Inequality Theorem
3. Thales Theorem
4. Congruent Triangle Theorem

Q238 - Mathematics - Pythagorean Theorem

If a right-angled triangle has legs of 7 units and 24 units, what is the length of the hypotenuse?

1. 26 units
2. 23 units
3. 25 units
4. 24 units

Q239 - Mathematics - Pythagorean Theorem

A right-angled triangle has a hypotenuse of 25 units and one leg of 20 units. What is the length of the other leg?

1. 15 units
2. 9 units
3. 18 units
4. 11 units

Q240 - Mathematics - Pythagorean Theorem

If the hypotenuse of a right-angled triangle is 17 units and one leg is 8 units, what is the length of the other leg?

1. 10 units
2. 12 units
3. 15 units
4. 9 units

Q241 - Mathematics - Financial Literacy Money and Finances

What is a key advantage of using payment gateways and e-wallets like PayPal when dealing with multiple currencies?

1. They provide faster transaction times.
2. They simplify currency conversion processes.
3. They offer competitive exchange rates.
4. They eliminate transaction fees.

Q242 - Mathematics - Financial Literacy Money and Finances

What is a disadvantage of using dynamic currency conversion when making international

purchases?

1. It often results in higher exchange rates.
2. It requires manual currency selection.
3. It limits payment options.
4. It delays transaction processing.

Q243 - Mathematics - Financial Literacy Money and Finances

When creating a financial plan to reach a long-term goal, which factor is essential to consider?

1. Past financial decisions.
2. Current income only.
3. Short-term desires.
4. Expected expenses and tax implications.

Q244 - Mathematics - Financial Literacy Money and Finances

Which tool can help in maintaining a balanced budget by tracking all income and spending?

1. A tax calculator.
2. A scientific calculator.
3. A currency converter.
4. A budgeting app or spreadsheet.

Q245 - Mathematics - Financial Literacy Money and Finances

How does compound interest differ from simple interest?

1. Simple interest grows faster over time.
2. Compound interest is calculated only on the initial principal.
3. Simple interest includes interest on accumulated interest.
4. Compound interest includes interest on both the principal and accumulated interest.

Q246 - Mathematics - Financial Literacy Money and Finances

What is the effective interest rate in compound interest?

1. The monthly interest rate multiplied by 12.
2. The annual interest rate accounting for compounding periods.
3. The nominal interest rate without compounding.
4. The interest rate after taxes.

Q247 - Mathematics - Financial Literacy Money and Finances

Which method can be used to determine the growth of compound interest at various rates?

1. Guessing based on past trends.
2. Consulting a financial advisor.
3. Estimating mentally.
4. Using a scientific calculator.

Q248 - Mathematics - Financial Literacy Money and Finances

Why is it important to understand the impact of interest on long-term financial planning?

1. Interest rates are always constant.
2. Interest has minimal effect over time.
3. Interest can significantly increase the future value of savings.
4. Interest only affects loans, not savings.

Q249 - Mathematics - Financial Literacy Money and Finances

How can you determine the monthly deposit needed to achieve a specific future value in a savings annuity?

1. By ignoring interest rates.
2. By setting aside random amounts each month.
3. By using a formula that accounts for interest rate, time, and desired future value.
4. By guessing based on current savings.

Q250 - Mathematics - Financial Literacy Money and Finances

What should consumers consider when calculating sales and percentage discounts?

1. The percentage off the original price.
2. The final sale price after discount.
3. The tax amount added to the final price.
4. Only the original price.

Q251 - Mathematics - Financial Literacy Money and Finances

What is the importance of understanding credit scores in financial planning?

1. It affects the interest rates on savings accounts.
2. It has no effect on financial decisions.

3. It helps lenders determine financial responsibility.
4. It only applies to loan approvals.

Q252 - Mathematics - Financial Literacy Money and Finances

How can a person minimize interest paid on a loan?

1. By making minimum payments only.
2. By extending the repayment term.
3. By paying more than the minimum due.
4. By increasing the loan amount.

Q253 - Mathematics - Financial Literacy Money and Finances

Which financial principle helps individuals manage their income and expenses effectively?

1. Spending without budgeting.
2. Creating a financial plan.
3. Avoiding credit cards completely.
4. Spending all income on necessities.

Q254 - Mathematics - Financial Literacy Money and Finances

What is an example of a good financial habit for long-term savings?

1. Withdrawing money frequently.
2. Ignoring future expenses.
3. Saving a fixed percentage of income.
4. Spending more than you earn.

Q255 - Mathematics - Financial Literacy Money and Finances

How can inflation impact the purchasing power of money over time?

1. It has no impact on money's value.
2. It increases the value of money over time.
3. It decreases the value of money over time.
4. It has an unpredictable effect.

Q256 - Mathematics - Spatial Sense Measurement

What is the standard unit of length in the metric system?

1. Meter
2. Kilometer
3. Centimeter
4. Millimeter

Q257 - Mathematics - Spatial Sense Measurement

Which of the following is the correct conversion from meters to centimeters?

1. 1 m = 10 cm
2. 1 m = 100 cm
3. 1 m = 1000 cm
4. 1 m = 10 mm

Q258 - Mathematics - Spatial Sense Measurement

If a rectangle has a length of 10 cm and a width of 5 cm, what is its area?

1. 15 cm
2. 50 cm
3. 25 cm
4. 30 cm

Q259 - Mathematics - Spatial Sense Measurement

What is the volume of a cube with a side length of 4 cm?

1. 16 cm
2. 64 cm
3. 32 cm
4. 48 cm

Q260 - Mathematics - Spatial Sense Measurement

Which unit is commonly used to measure angles?

1. Degree
2. Radian
3. Meter
4. Arcminute

Q261 - Mathematics - Spatial Sense Measurement

If a line segment is divided into two equal parts, what is each part called?

1. Half-line
2. Segment
3. Midpoint
4. Endpoint

Q262 - Mathematics - Spatial Sense Measurement

A right angle measures how many degrees?

1. 45
2. 90
3. 120
4. 180

Q263 - Mathematics - Spatial Sense Measurement

What is the perimeter of a square with a side length of 6 cm?

1. 36 cm
2. 24 cm
3. 30 cm
4. 12 cm

Q264 - Mathematics - Spatial Sense Measurement

Which of the following is the formula for the circumference of a circle?

1. d
2. 2r
3. r
4. d

Q265 - Mathematics - Spatial Sense Measurement

How many millimeters are there in 1 meter?

1. 10
2. 100
3. 1000
4. 10000

Q266 - Mathematics - Spatial Sense Measurement

If a triangle has a base of 8 cm and a height of 5 cm, what is its area?

1. 10 cm
2. 20 cm
3. 40 cm
4. 50 cm

Q267 - Mathematics - Spatial Sense Measurement

Which type of angle is greater than 90 degrees but less than 180 degrees?

1. Acute angle
2. Right angle
3. Obtuse angle
4. Reflex angle

Q268 - Mathematics - Spatial Sense Measurement

What is the formula for the area of a parallelogram?

1. 2b + h
2. b h
3. b h / 2
4. b + h

Q269 - Mathematics - Spatial Sense Measurement

A cylinder has a radius of 3 cm and a height of 7 cm. What is its volume?

1. 63 cm
2. 198 cm
3. 198 cm
4. 63 cm

Q270 - Mathematics - Spatial Sense Measurement

How many degrees are in a full rotation?

1. 90
2. 180
3. 270

4. 360

Q271 - Mathematics - Transformations and Congruence

Which transformation slides a figure without turning it?

1. Rotation
2. Reflection
3. Translation
4. Dilation

Q272 - Mathematics - Transformations and Congruence

What is the result of reflecting a figure over a line?

1. The figure is rotated.
2. The figure is enlarged.
3. The figure is flipped over the line.
4. The figure is translated.

Q273 - Mathematics - Transformations and Congruence

Which transformation turns a figure around a fixed point?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q274 - Mathematics - Transformations and Congruence

What do we call a combination of two or more transformations?

1. Rigid transformation
2. Sequence of transformations
3. Congruent transformation
4. Composite transformation

Q275 - Mathematics - Transformations and Congruence

Which transformation changes the size of a figure but not its shape?

1. Translation

2. Rotation
3. Dilation
4. Reflection

Q276 - Mathematics - Transformations and Congruence

If two figures are congruent, which of the following is true?

1. They have the same shape but different sizes.
2. They have the same size but different shapes.
3. They have the same size and shape.
4. They have different sizes and shapes.

Q277 - Mathematics - Transformations and Congruence

Which transformation does not preserve the size of a figure?

1. Translation
2. Rotation
3. Dilation
4. Reflection

Q278 - Mathematics - Transformations and Congruence

What is the image of a point after a 90-degree clockwise rotation around the origin?

1. (y, x)
2. (x, y)
3. (-y, x)
4. (-x, -y)

Q279 - Mathematics - Transformations and Congruence

Which sequence of transformations can map a figure onto itself?

1. Translation followed by reflection
2. Rotation followed by dilation
3. Reflection followed by rotation
4. Rotation by 360 degrees

Q280 - Mathematics - Transformations and Congruence

What is preserved under a reflection?

1. Orientation
2. Size and shape
3. Size only
4. Shape only

Q281 - Mathematics - Transformations and Congruence

Which transformation maps a figure onto a congruent figure?

1. Dilation
2. Translation
3. Stretching
4. Shearing

Q282 - Mathematics - Transformations and Congruence

If a figure is rotated 180 degrees around the origin, what are the coordinates of the image of point (x, y)?

1. (-x, -y)
2. (y, -x)
3. (-y, x)
4. (x, -y)

Q283 - Mathematics - Transformations and Congruence

Which transformation moves a figure without changing its size, shape, or orientation?

1. Translation
2. Rotation
3. Reflection
4. Dilation

Q284 - Mathematics - Transformations and Congruence

If a figure is dilated with a scale factor greater than 1, what happens to the figure?

1. It becomes smaller.
2. It remains the same size.
3. It enlarges.
4. It remains unchanged.

Q285 - Mathematics - Transformations and Congruence

Which of the following transformations does NOT create a congruent figure?

1. Translation
2. Rotation
3. Dilation
4. Reflection

Q286 - Mathematics - Algebra Coding

What is the primary purpose of writing and executing code to solve mathematical problems?

1. To create visual art
2. To analyze data and inform decisions
3. To play music
4. To browse the internet

Q287 - Mathematics - Algebra Coding

Which of the following best describes a computational representation in coding?

1. A physical model
2. A written essay
3. A program that simulates a mathematical situation
4. A hand-drawn graph

Q288 - Mathematics - Algebra Coding

How can altering existing code help in understanding mathematical data analysis?

1. It makes the code run faster
2. It changes the hardware requirements
3. It helps understand how changes affect outcomes and efficiency
4. It increases the file size

Q289 - Mathematics - Algebra Coding

What is a key benefit of using code to analyze data in mathematics?

1. It decorates the data
2. It provides precise and repeatable analysis
3. It hides the data

4. It makes data less accessible

Q290 - Mathematics - Algebra Coding

Which programming concept is essential for creating loops in code?

1. Variables
2. Functions
3. Iteration
4. Conditionals

Q291 - Mathematics - Algebra Coding

In coding, what is a variable used for?

1. To store data values
2. To create graphics
3. To play sounds
4. To manage hardware

Q292 - Mathematics - Algebra Coding

How does debugging improve a program?

1. It adds more features
2. It increases the file size
3. It identifies and fixes errors
4. It changes the user interface

Q293 - Mathematics - Algebra Coding

What does the term 'algorithm' refer to in programming?

1. A type of computer
2. A step-by-step procedure to solve a problem
3. A programming language
4. A software application

Q294 - Mathematics - Algebra Coding

Why is it important to test a program with different data sets?

1. To make the code more complex

2. To ensure it works under various conditions
3. To increase the development time
4. To reduce the number of lines of code

Q295 - Mathematics - Algebra Coding

What is the role of comments in code?

1. To execute commands
2. To store variables
3. To explain and document the code
4. To increase processing speed

Q296 - Mathematics - Algebra Coding

Which data structure allows you to store multiple values in a single variable?

1. Loop
2. Array
3. Function
4. Condition

Q297 - Mathematics - Algebra Coding

What is the purpose of a conditional statement in code?

1. To perform repetitive tasks
2. To make decisions based on certain conditions
3. To define variables
4. To comment the code

Q298 - Mathematics - Algebra Coding

How can functions improve the efficiency of a program?

1. By reducing code duplication
2. By increasing the number of variables
3. By slowing down execution
4. By complicating the code

Q299 - Mathematics - Algebra Coding

What does 'syntax' refer to in programming?

1. The speed of the program
2. The graphical interface
3. The set of rules that defines programming structure
4. The user interface

Q300 - Mathematics - Algebra Coding

Which of the following best describes debugging?

1. Identifying and fixing errors
2. Adding new features to a program
3. Testing the speed of a program
4. A way to change code colors

Q301 - Mathematics - Number Sense Rational and Irrational Numbers

Which of the following numbers is rational?

1. (pi)
2. 2
3. 0.75
4. e (Euler's number)

Q302 - Mathematics - Number Sense Rational and Irrational Numbers

What is the approximate value of 2?

1. 1.414
2. 1.5
3. 1.618
4. 2

Q303 - Mathematics - Number Sense Rational and Irrational Numbers

Which of these numbers is irrational?

1. 4/5
2. 0.333...
3. 3
4. 7

Q304 - Mathematics - Number Sense Rational and Irrational Numbers

How is 5,000,000 written in scientific notation?

1. 5 10^5
2. 5 10^6
3. 5.5 10^6
4. 5 10^7

Q305 - Mathematics - Number Sense Rational and Irrational Numbers

Which of the following is a repeating decimal?

1. 0.5
2. 0.333...
3. 0.25
4. 0.125

Q306 - Mathematics - Number Sense Rational and Irrational Numbers

What is the square root of 49?

1. 6
2. 7
3. 8
4. 9

Q307 - Mathematics - Number Sense Rational and Irrational Numbers

Which of these numbers is not a perfect square?

1. 16
2. 25
3. 30
4. 36

Q308 - Mathematics - Number Sense Rational and Irrational Numbers

How is 0.0008 expressed in scientific notation?

1. 8 10^-3
2. 8 10^-4
3. 8 10^3
4. 8 10^4

Q309 - Mathematics - Number Sense Rational and Irrational Numbers

Which of the following is an example of an irrational number?

1. 22/7
2. 0.75
3. 5
4. -3

Q310 - Mathematics - Number Sense Rational and Irrational Numbers

What is the decimal representation of 3/4?

1. 0.25
2. 0.5
3. 0.75
4. 1

Q311 - Mathematics - Number Sense Rational and Irrational Numbers

Which of these numbers is a terminating decimal?

1. 1/3
2. 0.75
3. 5
4. 7

Q312 - Mathematics - Number Sense Rational and Irrational Numbers

Which of the following is a rational number?

1. 5
2.
3. 1/2
4. 3

Q313 - Mathematics - Number Sense Rational and Irrational Numbers

What is 3 + 2 in decimal form?

1. 5.142
2. 5.414
3. 5.618

4. 6.0

Q314 - Mathematics - Number Sense Rational and Irrational Numbers

Which of these is a non-terminating, non-repeating decimal?

1. 0.25
2. 1/3
3.
4. 2

Q315 - Mathematics - Number Sense Rational and Irrational Numbers

What is the reciprocal of 2/5?

1. 5/2
2. 2/5
3. 1/2
4. 5/4

Q316 - Mathematics - Operations Math Facts

What is the sum of 15 and 27?

1. 42
2. 52
3. 62
4. 72

Q317 - Mathematics - Operations Math Facts

What is the difference between 58 and 29?

1. 19
2. 29
3. 39
4. 49

Q318 - Mathematics - Operations Math Facts

What is -7 minus 3?

1. -4

2. 4
3. -10
4. 10

Q319 - Mathematics - Operations Math Facts

What is the product of 12 and 8?

1. 80
2. 90
3. 96
4. 104

Q320 - Mathematics - Operations Math Facts

What is 18 plus (-7)?

1. 11
2. -11
3. 25
4. -25

Q321 - Mathematics - Operations Math Facts

What is the quotient of 144 divided by 12?

1. 10
2. 11
3. 12
4. 13

Q322 - Mathematics - Operations Math Facts

What is the square of 9?

1. 18
2. 27
3. 36
4. 45

Q323 - Mathematics - Operations Math Facts

What is the sum of -10 and 15?

1. 5
2. -5
3. 25
4. -25

Q324 - Mathematics - Operations Math Facts

What is the cube of 3?

1. 6
2. 9
3. 27
4. 81

Q325 - Mathematics - Operations Math Facts

What is the sum of -8 and -4?

1. -12
2. 12
3. 0
4. -2

Q326 - Mathematics - Operations Math Facts

What is the square root of 64?

1. 6
2. 7
3. 8
4. 9

Q327 - Mathematics - Operations Math Facts

What is the cube root of 27?

1. 2
2. 3
3. 4
4. 5

Q328 - Mathematics - Operations Math Facts

What is 15 plus (-20)?

1. 5
2. -5
3. 35
4. -35

Q329 - Mathematics - Operations Math Facts

What is -4 minus (-9)?

1. -13
2. 13
3. -5
4. 5

Q330 - Mathematics - Operations Math Facts

What is 20 minus (-10)?

1. 10
2. 30
3. -10
4. -30

Q331 - Mathematics - Operations Math Facts

What is the product of -3 and 6?

1. -18
2. 18
3. 9
4. -9

2cool4school - Grade 8 Mathematics Worksheet

Answer Key

Q1: 8x

Q2: 7m - n

Q3: 14

Q4: 2

Q5: 3

Q6: x > 3

Q7: 8

Q8: -9

Q9: 5

Q10: 5

Q11: 3

Q12: 3x - 5 > 10

Q13: (x - 3)(x + 3)

Q14: 6

Q15: x 3

Q16: 1 1/2

Q17: 2 3/4

Q18: 1/2

Q19: -4

Q20: $3

Q21: 12

Q22: 3

Q23: 60 mph

Q24: 56

Q25: 5/8

Q26: 7

Q27: 64

Q28: 3/5

Q29: $45

Q30: 4/3

Q31: 5 x 10^3

Q32: 3 x 10^5

Q33: 32000

Q34: 5.6 x 10^-4

Q35: 0.0075

Q36: 3.21 x 10^-5

Q37: 7 x 10^2

Q38: 4.5 x 10^-6

Q39: 2.5 x 10^3

Q40: 300000

Q41: 0.008

Q42: 48000000

Q43: 7 x 10^3

Q44: 6 x 10^5

Q45: 3 x 10^3

Q46: 2

Q47: 5/10

Q48: 1/4

Q49: -11

Q50: -23

Q51: -6

Q52: -5

Q53: 3

Q54: 7/10

Q55: 6

Q56: 10

Q57: 1/4

Q58: 7/6

Q59: -5

Q60: 5/8

Q61: 14

Q62: 2

Q63: 5/6

Q64: 50

Q65: 20

Q66: 50

Q67: 5/8

Q68: 15

Q69: 4
Q70: Associative Property
Q71: 30
Q72: 7/4
Q73: 19
Q74: 50
Q75: 2
Q76: 72
Q77: -15
Q78: 33
Q79: 54
Q80: -28
Q81: 12
Q82: 49
Q83: 8
Q84: 18
Q85: 9
Q86: 4
Q87: -5
Q88: 5
Q89: -8
Q90: 7
Q91: 72
Q92: -15
Q93: 33
Q94: 54
Q95: 12
Q96: -28
Q97: 49
Q98: 18
Q99: 8
Q100: 9
Q101: 4
Q102: -5
Q103: 5

Q104: -8

Q105: 7

Q106: 1/6

Q107: 3/8

Q108: 3/10

Q109: 2/13

Q110: 1/2

Q111: Product of probabilities

Q112: 1/2

Q113: 2/5

Q114: 3/10

Q115: 1/2

Q116: 2/5

Q117: 1/6

Q118: 3/5

Q119: 1/3

Q120: 4/7

Q121: 12

Q122: 29

Q123: 35

Q124: 135

Q125: 2 2 3 5

Q126: 9

Q127: 7

Q128: 1

Q129: 20

Q130: 6

Q131: 3 3 5

Q132: 24

Q133: 6

Q134: 31

Q135: 36

Q136: $16

Q137: 60 mph

Q138: All of the above

Q139: 20

Q140: 6

Q141: A straight line that passes through the origin

Q142: $28

Q143: 150 miles

Q144: y = 3x

Q145: 6

Q146: $15

Q147: The ratio of the variables

Q148: 12

Q149: 2 meters

Q150: $180

Q151: Regular hexagon

Q152: Reflection

Q153: 100 cm

Q154: Rotation

Q155: Regular pentagon

Q156: The shape's dimensions are tripled.

Q157: Dilation

Q158: (y, -x)

Q159: Translation

Q160: 5 cm

Q161: Translation

Q162: (-x, y)

Q163: Tessellation

Q164: It becomes smaller.

Q165: Reflection

Q166: Test scores of students across different subjects

Q167: When analyzing the relationship between two different variables

Q168: Scatter plot

Q169: To represent data in a visually appealing way and tell a story

Q170: Positive correlation

Q171: As one variable increases, the other increases significantly

Q172: Starting the y-axis at a value other than zero to exaggerate differences

Q173: They can significantly affect the results and interpretations

Q174: Mean

Q175: The overall pattern or trend in the data

Q176: Using a histogram or frequency table

Q177: Ensuring a diverse and representative sample

Q178: Quantitative continuous data

Q179: To accurately interpret the information

Q180: A dataset with extreme values

Q181: Defining the problem

Q182: All of the above

Q183: A real-world situation

Q184: Random models

Q185: A condition that limits the possible solutions

Q186: To represent unknown quantities

Q187: To simplify the model

Q188: Exponential model

Q189: A set of linear relationships

Q190: A set of values that satisfy the inequality

Q191: It represents a fixed value

Q192: To find the values of unknown variables

Q193: A range of possible values

Q194: It helps to simplify real-world problems

Q195: To visualize the relationships between variables

Q196: 25

Q197: 3n

Q198: 9

Q199: 26

Q200: 62

Q201: $y = 3x + 2$

Q202: $y = 2x + 1$

Q203: 5

Q204: 108

Q205: A straight line

Q206: 48

Q207: 36

Q208: 14

Q209: 2, 4, 8, 16

Q210: -3

Q211: To determine the amount of foreign currency received for one unit of domestic currency.

Q212: Divide the total price by the number of units.

Q213: $55

Q214: $32

Q215: $3.75

Q216: Simple interest is calculated only on the principal amount, while compound interest is calculated on

Q217: $150

Q218: Income after all taxes and deductions have been subtracted.

Q219: A plan for managing income and expenses.

Q220: To cover unexpected expenses without going into debt.

Q221: Imports become more expensive.

Q222: Annual Percentage Rate

Q223: Earning more interest over time.

Q224: Rent

Q225: To detect fraud or errors.

Q226: 5 units

Q227: 12 units

Q228: 7, 24, 25

Q229: 52 units

Q230: 13 feet

Q231: 10 units

Q232: 9, 12, 15

Q233: 8 units

Q234: 15 units

Q235: Yes

Q236: 12 units

Q237: Pythagorean Theorem

Q238: 25 units

Q239: 15 units

Q240: 15 units

Q241: They offer competitive exchange rates.

Q242: It often results in higher exchange rates.

Q243: Current income only.

Q244: A scientific calculator.

Q245: Compound interest is calculated only on the initial principal.

Q246: The nominal interest rate without compounding.

Q247: Using a scientific calculator.

Q248: Interest has minimal effect over time.

Q249: By using a formula that accounts for interest rate, time, and desired future value.

Q250: Only the original price.

Q251: It affects the interest rates on savings accounts.

Q252: By extending the repayment term.

Q253: Spending without budgeting.

Q254: Spending more than you earn.

Q255: It has no impact on money's value.

Q256: Meter

Q257: 1 m = 100 cm

Q258: 50 cm

Q259: 64 cm

Q260: Degree

Q261: Midpoint

Q262: 90

Q263: 24 cm

Q264: 2r

Q265: 1000

Q266: 20 cm

Q267: Obtuse angle

Q268: b h

Q269: 198 cm

Q270: 360

Q271: Translation

Q272: The figure is flipped over the line.

Q273: Rotation

Q274: Composite transformation

Q275: Dilation

Q276: They have the same size and shape.

Q277: Dilation

Q278: (-y, x)

Q279: Rotation by 360 degrees

Q280: Size and shape

Q281: Translation

Q282: (-x, -y)

Q283: Translation

Q284: It enlarges.

Q285: Dilation

Q286: To analyze data and inform decisions

Q287: A program that simulates a mathematical situation

Q288: It helps understand how changes affect outcomes and efficiency

Q289: It provides precise and repeatable analysis

Q290: Iteration

Q291: To store data values

Q292: It identifies and fixes errors

Q293: A step-by-step procedure to solve a problem

Q294: To ensure it works under various conditions

Q295: To explain and document the code

Q296: Array

Q297: To make decisions based on certain conditions

Q298: By reducing code duplication

Q299: The set of rules that defines programming structure

Q300: Identifying and fixing errors

Q301: 0.75

Q302: 1.414

Q303: 3

Q304: 5 10^6

Q305: 0.333...

Q306: 7

Q307: 30

Q308: 8 10^-4

Q309: 5

Q310: 0.75

Q311: 0.75

Q312: 1/2

Q313: 5.414

Q314:

Q315: 5/2

Q316: 42

Q317: 39

Q318: -4

Q319: 96

Q320: 11

Q321: 12

Q322: 36

Q323: 5

Q324: 27

Q325: -12

Q326: 8

Q327: 3

Q328: -5

Q329: -13

Q330: 30

Q331: -18