

Math Worksheets For 8th Graders Answer Key PDF

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Part 1: Building a Foundation

What is the value of 2^3 ?

undefined. A) 6

undefined. B) 8 ✓

undefined. C) 9

undefined. D) 12

The value of 2^3 is 8.

Which of the following are properties of a linear function?

undefined. A) Constant rate of change ✓

undefined. B) Graph is a straight line ✓

undefined. C) Has a maximum point

undefined. D) Can be represented by $y = mx + b$ ✓

Linear functions have a constant rate of change and can be represented by $y = mx + b$.

Explain in your own words what the Pythagorean Theorem is and provide an example.

The Pythagorean Theorem states that in a right triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides.

List the steps to solve a system of equations using the substitution method.

1. Step 1

Isolate one variable.

2. Step 2

Substitute into the other equation.

3. Step 3

Solve for the remaining variable.

The steps include isolating one variable, substituting it into the other equation, and solving for the remaining variable.

Part 2: Comprehension and Application

Which transformation involves flipping a figure over a line?

undefined. A) Translation

undefined. B) Rotation

undefined. C) Reflection ✓

undefined. D) Dilation

The transformation that involves flipping a figure over a line is called reflection.

Which of the following are true about rational numbers?

undefined. A) They can be expressed as a fraction ✓

undefined. B) They include repeating decimals ✓

undefined. C) They are always positive

undefined. D) They can be whole numbers ✓

Rational numbers can be expressed as fractions and include whole numbers and repeating decimals.

If a triangle has sides of 3 cm, 4 cm, and 5 cm, what is the area of the triangle?

undefined. A) 6 cm² ✓

undefined. B) 12 cm²

undefined. C) 10 cm²

undefined. D) 8 cm²

The area of the triangle is 6 cm².

You have a box of marbles with 5 red, 3 blue, and 2 green marbles. What is the probability of picking a red or blue marble?

undefined. A) $\frac{1}{2}$

undefined. B) $\frac{4}{5}$ ✓

undefined. C) $\frac{8}{10}$

undefined. D) $\frac{2}{5}$

The probability of picking a red or blue marble is $\frac{4}{5}$.

Apply the Pythagorean Theorem to find the length of the hypotenuse of a right triangle with legs of 7 cm and 24 cm.

The length of the hypotenuse is 25 cm.

Part 3: Analysis, Evaluation, and Creation

Which graph represents a function that is not linear?

undefined. A) A straight line

undefined. B) A parabola ✓

undefined. C) A horizontal line

undefined. D) A diagonal line

A parabola represents a function that is not linear.

Analyze the following statements and identify which are true about transformations:

undefined. A) A dilation changes the size of a figure ✓

undefined. B) A rotation changes the orientation of a figure ✓

undefined. C) A translation changes the shape of a figure

undefined. D) A reflection changes the size of a figure

A dilation changes the size of a figure, and a rotation changes its orientation.

Which method would be most efficient for solving the system of equations: $\{2x + 3y = 6\}$ and $\{4x - y = 5\}$?

undefined. A) Graphing

undefined. B) Substitution

undefined. C) Elimination ✓

undefined. D) Trial and error

The elimination method would be the most efficient for this system.

Create a real-world scenario where you would use the Pythagorean Theorem. Which of the following scenarios apply?

undefined. A) Determining the height of a tree using a shadow ✓

undefined. B) Calculating the distance between two points on a map ✓

undefined. C) Finding the area of a rectangle

undefined. D) Designing a triangular garden plot ✓

Scenarios include determining the height of a tree using a shadow and designing a triangular garden plot.

Propose a method to teach the concept of linear functions to a peer who is struggling. Include examples and visual aids in your explanation.

Use visual aids like graphs and real-life examples to explain linear functions.