RATIOS AND PROPORTIONS Bell Work

1. The ratio is a comparison between two numbers using:
   A. Addition
   B. Multiplication
   C. Division
   D. Subtraction

2. Which of these is a correct way of representing a ratio?
   A. \( \frac{1}{2} \)
   B. \( 1 : 2 \)
   C. \( 1 \) to \( 2 \)
   D. All of these

3. In the proportion \( \frac{a}{b} = \frac{c}{d} \), the extremes are:
   A. \( a \) and \( d \)
   B. \( c \) and \( b \)
   C. \( a \) and \( c \)
   D. \( b \) and \( d \)

4. In the proportion \( \frac{a}{b} = \frac{c}{d} \), the means are:
   A. \( a \) and \( d \)
   B. \( c \) and \( b \)
   C. \( a \) and \( c \)
   D. \( b \) and \( d \)

5. The solution of \( \frac{8}{x} = 2 \) is:
   A. 16
   B. 4
   C. 0
   D. 28

6. The proportion is a/an:
   A. Equality statement
   B. Inequality statement
   C. Both A. And B.
   D. None of these.
RATIOS AND PROPORTIONS  Bell Work

7. The ratio of the side lengths of a triangle is $3:5:7$, and its perimeter is $60 \text{ ft}$. What is the length of the shortest side of the triangle?

8. The ratio of the length to width of a rectangle is $7:3$ and its perimeter is $80 \text{ cm}$. What is the length of the rectangle?

9. The ratio of the side lengths of a quadrilateral is $2:4:5:7$, and its perimeter is $54 \text{ m}$. What is the length of the shortest side?

10. The ratio of the angle measure in a kite is $2:3:7:3$. What is the measure of each angle?
RATIOS AND PROPORTIONS  Bell Work

ANSWER

1. The ratio is a comparison between two numbers using:
   E. Addition
   F. Multiplication
   G. Division
   H. Subtraction

2. Which of these is a correct way of representing a ratio?
   E. \( \frac{1}{2} \)
   F. \( 1 : 2 \)
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5. The solution of \( \frac{8}{x} = 2 \) is:
   E. 16
   F. 4
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   H. 28

6. The proportion is a/an:
   E. Equality statement
   F. Inequality statement
   G. Both A. And B.
   H. None of these.
RATIOS AND PROPORTIONS  Bell Work

7. The ratio of the side lengths of a triangle is 3:5:7, and its perimeter is 60 ft. What is the length of the shortest side of the triangle?

\[ 3:5:7 \rightarrow 3x:5x:7x \]

\[ P = 60 \text{ ft} \]
\[ P = 3x + 5x + 7x = 15x \]
\[ 60 \text{ ft} = 15x \]
\[ \frac{60 \text{ ft}}{15} = \frac{15x}{15} \]
\[ 4 \text{ ft} = x \]
\[ \text{shortest side} = 3x = 3(4 \text{ ft}) = 12 \text{ ft} \]

8. The ratio of the length to width of an rectangle is 7:3 and its perimeter is 80 cm. What is the length of the rectangle?

\[ L:W = 7:3 \rightarrow 7x:3x \]

\[ P = 80 \text{ cm} \]
\[ P = 2L + 2W = 2(7x) + 2(3x) = 14x + 6x = 20x \]
\[ 80 \text{ cm} = 20x \]
\[ \frac{80 \text{ cm}}{20} = \frac{20x}{20} \]
\[ 4 \text{ cm} = x \]
\[ L = 7x = 7(4 \text{ cm}) = 28 \text{ cm} \]

9. The ratio of the side lengths of a quadrilateral is 2:4:5:7, and its perimeter is 54 m. What is the length of the shortest side?

\[ 2:4:5:7 \rightarrow 2x:4x:5x:7x \]

\[ P = 54 \text{ m} \]
\[ P = 2x + 4x + 5x + 7x = 18x \]
\[ 54 \text{ m} = 18x \]
\[ \frac{54 \text{ m}}{18} = \frac{18x}{18} \]
\[ 3 \text{ m} = x \]
\[ \text{shortest side} = 2x = 2(3 \text{ m}) = 6 \text{ m} \]
10. The ratio of the angle measure in a kite is $2:3:7:3$. What is the measure of each angle?

$$2 : 3 : 5 : 3 \rightarrow 2x : 3x : 7x : 3x$$

$\Sigma$ interior $\angle$ of quadrilateral $= 360^\circ$

$\Sigma$ interior $\angle$ of quadrilateral $= 2x + 3x + 7x + 3x = 15x$

$360^\circ = 15x$

$$\frac{360^\circ}{15} = \frac{15x}{15}$$

$24^\circ = x$

$2x = 2(24^\circ) = 2x = 48^\circ$  
$3x = 3(24^\circ) = 3x = 72^\circ$  
$7x = 7(24^\circ) = 3x = 168^\circ$

$2 : 3 : 5 : 3 \rightarrow 48^\circ : 72^\circ : 168^\circ : 72^\circ$