

2008 Middle School Math Festival Team Round: McDougal Littell Course 2

Unless stated in the problem, answers will be written as an integer or an exact decimal (i.e. do not round). Any problems requiring a common fraction or mixed number for the answer will always require the fractional part to be in lowest terms.

1. A rectangle has length and width of 8 and 7 respectively. Calculate $\frac{\text{Area}}{\text{Perimeter}}$.

Write the answer as a mixed number with the fraction part in lowest terms.

2. Calculate $A + B$ where $A = 0.884 \div 0.26$ and $B = 6.4 \times 9.05$.

3. Calculate CD where C kiloliters = 120 liters and $D = 42.9 - 26.74$.

4. Calculate $\frac{\text{Mean}}{\text{Median}}$ for the following data: {8, 7, 2, 9, 11, 7, 10, 3, 12, 2, 6}.

5. Determine the GCF of 32 and 26 and the LCM of 12 and 16. Calculate $\frac{\text{GCF}}{\text{LCM}}$.

Write the answer as a common fraction in lowest terms.

6. Calculate $A - B$ where $A = 7\frac{3}{4} + 1\frac{5}{6}$ and $B = 5\frac{1}{2} - 3\frac{3}{8}$.

Write the answer as a mixed number with the fraction part in lowest terms.

7. Calculate $C \div D$ where $C = \frac{5}{8} \times 4\frac{4}{9}$ and $D = \frac{7}{24} \div 1\frac{3}{4}$.

Write the answer as a mixed number with the fraction part in lowest terms.

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8. Calculate EF where $E = -8 - (-6) - 5$ and $F = -18 + 14$.

9. Calculate $\frac{G}{H}$ where $G = (-3)(-4)(-2)$ and $H = -42 \div (-14)$.

10. Calculate xy where $2x + 7 = -6$ and $\frac{1}{4}y - 1 = 1$.

11. Calculate KS where K is the solution to $\frac{30}{12} = \frac{6}{K}$ and $S =$ slope of the line between $(7, 2)$ and $(-5, 4)$.

12. Calculate $P - Q$ where $P\%$ of 32 is 12 and Q is 27% of 250.

13. Calculate $R + S$ where

$R =$ % increase from 32 to 35 and $S =$ % decrease from 48 to 45.

14. Calculate $\frac{\text{Supplementary angle of } 86^\circ}{\text{Complementary angle of } 86^\circ}$.

15. A right triangle has a leg of length 40 and a hypotenuse of length 41. Let $G =$ the length of the remaining leg. Let $H =$ the area of the triangle. Calculate $\frac{G}{H}$.

Write the answer as a common fraction in lowest terms.