

2008 Middle School Math Festival Team Round: McDougal Littell Course 1

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. Calculate $\frac{B}{A}$ where $A = 348 - 72$ and $B = 156 \div 4$.

Write the answer as a common fraction in lowest terms.

2. Calculate CD where $C = 9 \times (2 + 6) \div 12$ and $D = 10 - 2 \times 3 + 7$.

3. Calculate $\frac{E}{F}$ where $E = 7^3$ and $70 \div F = 10$.

4. Calculate (Mean + Median) for the following data: {22, 25, 30, 31, 34, 40, 49}.

5. A rectangle has a length and width of 6 and 3, respectively.
What is (Area – Perimeter)?

6. Calculate $P + Q$ where $P =$ seventy-two thousandths and $Q = 8.24 - 6.1$.

7. Calculate $R - S$ where $S = (9.2)(0.36)$ and $R = 29 \div 8$.

8. Calculate $\frac{V}{W}$ where

$$V \text{ liters} = 480,000 \text{ milliliters and } 100 \text{ centimeters} = W \text{ millimeters.}$$

9. Calculate AB where $A =$ GCF of 25, 50, and 70 and $B =$ LCM of 4, 8, and 10.

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10. Calculate $\frac{A}{B}$ where $A = 2\frac{5}{12} + 4\frac{2}{3}$ and $B = 4\frac{1}{6} - 1\frac{2}{3}$.

Write the answer as a common fraction in lowest terms.

11. Calculate $C + D$ where $C = 1\frac{3}{4} \times \frac{2}{3}$ and $D = \frac{7}{8} \div 1\frac{1}{2}$.

Write the answer as a common fraction in lowest terms.

12. Calculate EF where $\frac{3}{8} = E\%$ and $8\% \text{ of } 4 = F$.

13. A right triangle has legs of lengths 4 and 6. A parallelogram has a base of 5 and a height 4. Calculate $\frac{\text{Area}_{\text{triangle}}}{\text{Area}_{\text{parallelogram}}}$.

14. A circle has a diameter of 8. Calculate $\text{Area}_{\text{circle}} \div \text{Circumference}_{\text{circle}}$.

15. Calculate $D - E$ where $D = -9(6)$ and $E = -70 \div 14$.