



Topic 1: Integers and Rational Numbers

Questions 1 – 8 Evaluate.

1. $-29 + (-8) =$
2. $41 + (-17) =$
3. $36 - 87 =$
4. $-12 - (-25) =$
5. $(-5)(-14) =$
6. $\frac{64}{-4} =$
7. $9 - (1 - 8) + 19 =$
8. $\frac{(-4)^2 - 36}{-2 - (-7)} =$

Questions 9 – 10 Express as a simplified fraction.

9. $\frac{15}{45} =$
10. $\frac{18}{63} =$

Questions 11 – 20 Perform the indicated operations, expressing final answer as a simplified fraction.

11. $\frac{3}{7} - \frac{1}{14} =$
12. $\frac{2}{15} + \frac{1}{25} =$
13. $\frac{9}{4} \cdot \frac{1}{6} =$
14. $\frac{5}{8} \div \frac{3}{8} =$



15. $\frac{3}{6} \div \frac{2}{16} =$

16. $\frac{\frac{7}{5}}{\frac{10}{3}} =$

17. $\frac{\frac{2}{9}}{18} =$

18. $\frac{8+6}{8 \cdot 6} =$

19. $\frac{1}{6 \cdot 4} - \frac{1}{6} =$

20. $\frac{\frac{1}{15} + \frac{1}{9}}{2} =$

Question 21 Let $p = -3$, $r = 5$, and $t = -2$. Evaluate the expression below, expressing final answer as a simplified integer.

$$p^2 - 3rt =$$

Question 22 Let $x = 6$, $y = -6$, and $z = -4$. Evaluate the expression below, expressing final answer as a simplified fraction.

$$\frac{x+y}{z+x} =$$