

Practice

Open Sentences

State whether each equation is true or false for the value of the variable given.

1. $\frac{2 + 12}{y} = \frac{1}{4}y, y = 7$

2. $5x^2 - 3(4) = 8, x = 2$

3. $n^3 \div 4 \div n^2 \div 2 \leq \frac{1}{2}, n = 4$

4. $\frac{2^3 - 3y}{4^2 - 2} \geq 12, y = 2$

5. $n^3 - n^2 + n < 130, n = 6$

6. $\frac{0.16 - 0.08}{x - 0.2} > 0.04, x = 0.3$

Find the solution set for each inequality if the replacement sets are $x = \{3\frac{1}{2}, 2, 3, 1\frac{1}{4}\}$ and $y = \{3, 5, 6, 8\}$.

7. $y + 6 < 10$

8. $x - 1 > 3$

9. $4x - 2 < 5$

10. $6y \geq 36$

11. $\frac{y}{3} \leq 2$

12. $2x - 1 \leq 2$

Solve each equation.

13. $s = 0.87 - 0.33$

14. $v = 2\frac{1}{4} \div 9$

15. $k = \frac{15 - 3}{0.6 + 0.6}$

16. $w = 140 \div [2(8 - 3)]$

17. $d = 10^3 - 5^4$

18. $p = \frac{16 - 4[2(3 - 2)]}{18 - 2[5 + 1]}$

19. $r = \frac{3^3 - 1^3}{8^2 - 12}$

20. $x = \frac{5^3 - 2^5}{4^3 - 2^2}$

21. $a = \frac{0.6 - 0.18}{0.02 - 0.01}$

22. $b = \frac{0.76 - 0.52}{0.75 - 0.63}$