

Solve each of the following equations & inequalities: (graph the solutions for the inequalities on a number line)

1) $\frac{1}{2}(x - 3) + \left(\frac{3}{2} - x\right) = 5x$

5) $\frac{3t}{5} - 3\left(t + \frac{4}{3}\right) > \frac{2t}{3} + \frac{1}{5}$

2) $.5w + .8 - 1.2w = .16 - .15w$

6) $0.5(c + 2.8) - c < 0.6c + 0.3$

3) $\frac{7}{3}y + \frac{5}{6} = 6y + \frac{11}{2}$

7) $.3(x+1) > 2.13(x + 1.1)$

4) $1.2(x + 5) = 1.6(2x + 5)$

8) $\frac{u}{5} + \frac{u}{10} - \frac{u}{6} \leq 1$

Solve for the indicated variable and state any restrictions:

9) $V = \frac{\pi}{3}r^2h$, h

14) $V = \frac{3k}{t}$, t

10) $\frac{x+3}{t} = t^2$, x

15) $\frac{4}{9}(x+3) = g$, x

11) $V = \frac{\pi}{3}r^2h$, r

16) $A = \frac{1}{2}ah - \frac{1}{2}bh$, h

12) $S = L(1-r)$, r

17) $a(x+c) = b(x-c)$, x

13) $Q = \frac{c+d}{2}$, d

18) $x - 2y = 5$, y