

Solving Equations in General

1. This exercise set is a big review, where you have equations of many different types to solve. Remembering or finding a strategy to solve each equation is the important exercise here. Even if it has been a while since you solved some of these types of equation.

a) $\sqrt{x} + 20 = x$

b) $3 + 4(y - 5) = 2 - 3(2y - 2)$

c) $x^2 + 5x = 24$

d) $t^2 + 4t = 13$

e) $\left| \frac{x-8}{4} \right| = 5$

f) $\frac{x+6}{x-4} + \frac{9}{x-6} = 2$

g) $12 - (x - 7)^2 = 3$

h) $\frac{p}{5} + \frac{p}{8} = \frac{2}{3}$

i) $t = \sqrt{t + 2} + 40$

j) $|2z - 9| = |z + 1|$

k) $\frac{1}{r + 8} + \frac{8}{r^2 + 8r} = -\frac{1}{4}$

l) $x^2 = -8x$

m) $\frac{1}{x - 7} + \frac{5}{x + 6} = -\frac{5}{x^2 - x - 42}$