

Section 1.6

Video 1

Solve.

$$1) \frac{4x+3}{4} - \frac{2x}{x+1} = x$$

$$2) \frac{3}{x-2} + \frac{1}{x+2} = \frac{12}{x^2-4}$$

Solve.

$$3) \frac{x}{x+2} - \frac{2}{x+6} = \frac{8}{x^2 + 8x + 12}$$

$$4) \frac{7}{x^2} + \frac{19}{x} = 6$$

Video 2

5) Rob takes 5 hours longer than Genevieve to paint a room. If they work together, they can paint a room in 6 hours. How long does it take Rob to paint a room by himself?

6) One small pipe takes 20 minutes longer to fill a tank than a larger pipe does. If it takes the two pipes 30 minutes to fill the tank when working together, how long will it take each pipe individually to fill the tank? Round to the nearest tenth of a minute.

Video 3

Solve.

$$7) \sqrt{3x-8} = x-4$$

$$8) \sqrt[3]{3x^2-9x+8} - \sqrt[3]{x} = 0$$

Video 4

Solve.

9) $\sqrt{3x+1} - \sqrt{x+4} = 1$

10) $\sqrt{3x+12} - \sqrt{2x} = 2$

Video 5

Solve.

11) $x^{5/2} = 1024$

12) $(2x-5)^{2/3} = 9$

Video 6

Solve.

$$13) (x-4)^{2/3} - 5(x-4)^{1/3} - 24 = 0$$

$$14) 15x^{-2} + 13x^{-1} + 2 = 0$$

Solve.

$$15) x^4 + 5x^2 - 36 = 0$$

$$16) x + 6\sqrt{x} - 40 = 0$$