

1. Find  $x$  if

$$x^2 + 7x + 12 = 0$$

2. Find  $x$  if

$$x^2 + 2x - 4 = 0$$

(Try this one two ways...one with and one without the quadratic formula)

3. Simplify (ie, write with fewer fraction bars)

$$\frac{\frac{1}{x+h} - \frac{1}{x}}{h}$$

4. Solve for  $x$ :

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

5. Simplify (write as separate fractions)

$$\frac{x^3 + 2x^2 - 1}{2x}$$

6. Simplify

$$\frac{x^2 - 10x + 16}{x^2 + x - 6}$$

7. Rationalize the Denominator in

$$\frac{2}{\sqrt{x^2 - 4} - 2}$$