

Pg. A46 0.5A – Solving Equations

Note: Ways to introduce an extraneous solution when solving an equation.

- 1) Multiplying each side by a variable
- 2) Raising each side of an equation to a rational power
(Ex: Square or Square Root)

Ex 1:

Solve the equation and check your solution. (If not possible, explain why.)

(a) $\frac{17+y}{y} + \frac{32+y}{y} = 100$

(b) $\frac{6}{x} - \frac{2}{x+3} = \frac{3(x+5)}{x^2+3x}$

General Form of Quadratic Equation: $ax^2 + bx + c = 0$

Ex 2:

Write the quadratic equation in general form.

$$x^2 = 16x$$

Ex 3:

Solve the quadratic equation by factoring.

$$x^2 - 10x + 9 = 0$$

Ex 4:

Solve the equation by extracting square roots.

$$(x-5)^2 = 30$$

Ex 5:

Solve the quadratic equation by completing the square.

$$x^2 - 2x - 3 = 0$$

Ex 6:

Solve the quadratic equation by completing the square.

$$9x^2 - 12x = 14$$