

Precalculus 115, section 1.5 Solving Equations

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Examples A: Solve the following linear (or equivalent to linear) equations.

1. $4t + 9 = 21 - 2t$

2. $y + 4[y - 2(y - 3)] = 5$

3. $\frac{w}{4} = \frac{3}{8}w - 2$

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

5. $d = a^2 + b - c$, for a

Examples B: Solve the following quadratic equations. Remember that you *must* set the equation equal to 0 before factoring or using the quadratic formula. (For this class, it is not necessary to know how to use completing the square. We'll go to the quadratic formula instead.)

1. $(x+1)^2 = 16$

2. $2x^2 - 9x = 5$

3. $2x^2 - 4x = 1$

4. $2x^2 + 3x + 4 = 0$

5. $\frac{2}{t} + \frac{20}{t^2 + 5t} = \frac{t+1}{t+5}$

$$6. \sqrt{4x+1} - 1 = x$$

$$7. (x-1)^{1/2} + (x-1)^{1/4} - 6 = 0$$

Examples C: Solve the following absolute value equations.

$$1. |2x-1| = 7$$

$$2.a. 2|x-1| - 4 = 0$$

$$2.b. 2|x-1| + 4 = 0$$