

Today's Plan:

Learning Target (standard): I will solve quadratic equations by factoring, square root property, completing the square and the quadratic formula.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work and complete quiz problems.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, and provide quiz problems.

Assessment: Board work, homework check and quiz

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in quiz problems.

Quadratic Equations #1-16

$$1)v = -5, -\frac{8}{5}$$

$$2)b = -\frac{1}{5}, 1$$

$$3)x = -\frac{7}{5}, 1$$

$$4)x = -\frac{7}{2}, 7$$

$$5)k = \frac{3\sqrt{2}}{2}i, -\frac{3\sqrt{2}}{2}i$$

$$6)a = 3\sqrt{10}, -3\sqrt{10}$$

$$7)p = \sqrt{23}, -\sqrt{23}$$

$$8)x = 8, -8$$

$$9)n = 4, 12$$

$$10)m = -1 + 2i, -1 - 2i$$

$$11)r = \frac{13 + \sqrt{485}}{2}, \frac{13 - \sqrt{485}}{2}$$

$$12)x = -15, -4$$

$$13)n = \frac{1}{18} - \frac{\sqrt{251}}{18}i, \frac{1}{18} + \frac{\sqrt{251}}{18}i$$

$$14)b = \frac{3}{5} + \frac{\sqrt{6}}{5}i, \frac{3}{5} - \frac{\sqrt{6}}{5}i$$

$$15)v = \frac{4}{5} + \frac{2}{5}i, \frac{4}{5} - \frac{2}{5}i$$

$$16)x = \frac{5}{11} + \frac{4\sqrt{6}}{11}i, \frac{5}{11} - \frac{4\sqrt{6}}{11}i$$

* QUIZ today! *

Solve by completing the square.

$$7x^2 + 15x - 56 = x$$

$$\frac{2}{2} = 1^2 = 1$$

$$\frac{7x^2}{7} + \frac{14x}{7} = \frac{56}{7}$$

$$x^2 + 2x + 1 = 8 + 1$$

$$\sqrt{(x+1)^2} = \sqrt{9}$$

$$x+1 = 3, -3$$

$$x = 2, -4$$

Solve using the quadratic formula.

$$3x^2 + 10x + 6 = 0$$

$$a = 3$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$b^2 - 4ac$$

$$b = 10$$

$$(10)^2 - 4(3)(6)$$

$$c = 6$$

$$= \frac{-10 \pm \sqrt{28}}{2(3)}$$

$$100 - 72$$

$$\div 2$$

$$= \frac{-10 \pm 2\sqrt{7}}{6}$$

$28 > 0$ 2 real solutions

$$x = \frac{-5 + \sqrt{7}}{3}, \frac{-5 - \sqrt{7}}{3}$$