WARM-UP Name _____ Per ____

Solve for x:

$5x - 2 = 0$

$+2 \quad +2$

$\frac{5x}{5} = \frac{2}{5}$

$x = 2/5$

OR

$x = 0.4$

$-x + 7 = 4$

$-7 \quad -7$

$\frac{-1x}{-1} = \frac{-3}{-1}$

$x = 3$

$-3x + 2 = 0$

$-2 \quad -2$

$\frac{-3x}{-3} = \frac{-2}{-3}$

$x = \frac{-2}{-3}$

$x = \frac{2}{3}$

$x = .67$

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Section 5.2C

1) A relief package is released from a helicopter at 1600 feet. The height of the package can be modeled by the equation $h = -16t^2 + 1550$, where h is the height of the package in feet and t is the time in seconds. The pilot wants to know how long it will take for the package to hit the roof of a building 50 feet off the ground.

SKIP

a) Write the equation that you are trying to solve. _____

b) Solve the equation by factoring.

2) A certain number added to its square is 30. Find the number. → Solve for x

call it x

$x^2 = 30$

Graph factor

$x + x^2 = 30$

$-30 \quad -30$

$x^2 + x - 30 = 0$

$x = -6 \quad x = 5$

$(x-5)(x+6)$

3) The height of a flare fired from the deck of a ship in distress can be modeled by $h = -16t^2 + 104t + 56$, where h is the height of the flare above water and t is the time in seconds. Find the time it takes the flare to hit the water.

a) Write the equation that you are trying to solve. $h = 0$ at the water $0 = -16x^2 + 104x + 56$

b) Solve the equation by factoring.

$x = 5$

$x = -6$

GCF $= -8$

$-8(2x^2 - 13x - 7)$

$0 = -8(1x - 7)(2x + 1)$

$2x + 1 = 0$

$-1 \quad -1$

$\frac{2x}{2} = \frac{-1}{2}$

$x = -0.5$ no

$1x - 7$

$2x \quad 2x^2 \quad +14x$

$-1x \quad -7$

$-13x$

$x = 7$ sec

4) The height of a triangle is 3 less than its base. The area of the triangle is 42 square inches. Find its base and height.

a) Draw a picture to represent the situation.

b) Write the equation that you are trying to solve. _____

c) Solve the equation by factoring.

HOMEWORK:

1 Mon 1/26	5.2	I can solve quadratic equations by factoring	5.2B #1-17 odd (P-11)		☺	😐	☹
Tues 1/27			P-13 #3-5				
QUIZ on Solving by graphing and factoring					☺	😐	☹
		I can simplify radical expressions	5.2D #1, 8 (P-15)		☺	😐	☹
		I can solve quadratic equations using square roots to find *rational* solutions	5.2E #1 – 7 (P-19)		☺	😐	☹