

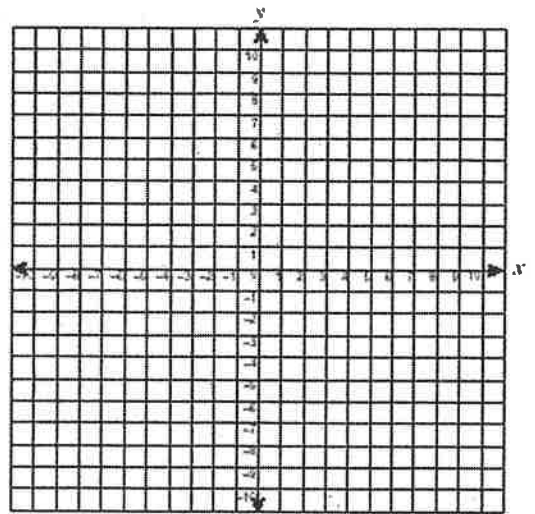
Chapter 3 – Quadratic Equations Problem Solving

Name: _____

Date: _____ Blk: _____

1) Solve: $-x^2 - 10x - 16 = 0$ by accurately graphing the corresponding function (from vertex form...Ch. 2 skill!)

(hint: change the 0 to a y...then graph...the x-intercepts are the solutions!)



ANSWER to 1):

2) Solve the equation $2x^2 - 5x - 3 = 0$ by
a) factoring.

ANSWER:

b) completing the square

ANSWER:

c) using the quadratic formula

ANSWER:

3) Solve $3x^2 - 4x - 8 = 0$ by completing the square. Leave the answer in exact form.

ANSWER:

4) Write the equations in standard form with roots:

a) -3 and 5

b) $\frac{3}{2}$ and $-\frac{1}{3}$

ANSWER:

ANSWER:

5) Determine the value of the discriminant and the nature of the roots for $2x^2 - 7x + 3 = 0$.

(hint: *nature of roots* means HOW MANY roots are there?)

DISCRIMINANT:

NATURE OF ROOTS:

6) Solve by factoring. $4n^2 - 11n + 6 = 0$

ANSWER:

7) Solve by the **quadratic formula**

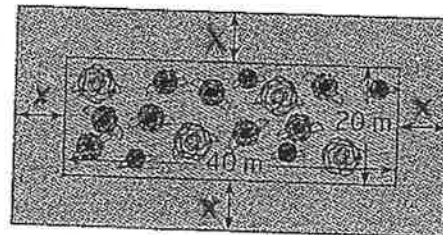
$$2x^2 + 4x - 5 = 0$$

ANSWER:

x =

* turn over


8) Sebastian plans to build a uniform walkway around a rectangular flower bed that is 20m by 40m. There is enough material to make a walkway that has a total area of 700m^2 . What is the width of the walkway?



SENTENCE ANSWER:

9) Lola popped a baseball straight up with an initial upward velocity of 48ft/s. The height, h , in feet, of the ball above the ground is modeled by the function $h(t) = 3 + 48t - 16t^2$, where t is time, in seconds. How long was the ball in the air if the catcher catches the ball 3ft above the ground?

SENTENCE ANSWER: