L7 Solving Quadratic Eqns Graphically
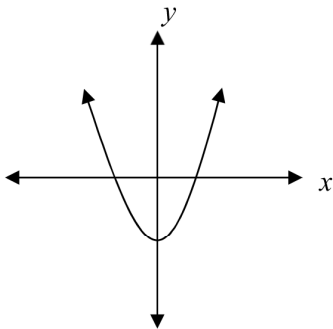
L7 Solving Quadratic Eqns Graphically

$ax^2 + bx + c$ quadratic expression
$y = ax^2 + bx + c$ quadratic function
$0 = ax^2 + bx + c$ quadratic equation

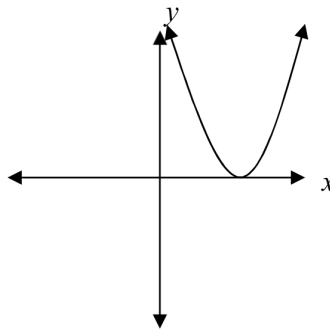## Lesson 7 Solving Quadratic Equations Graphically_____
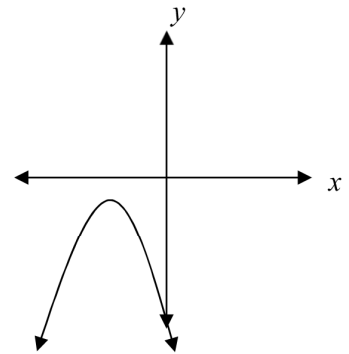
Recall:
Types of Solutions

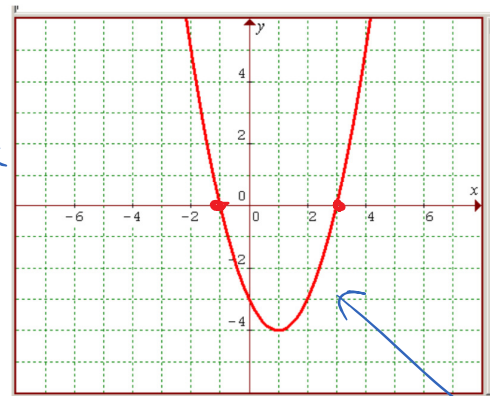| 2 Solutions	1 Solution	0 Solutions

Example 1
Use the given graph to solve each equation.

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

sol'n
$x = -1, 3$

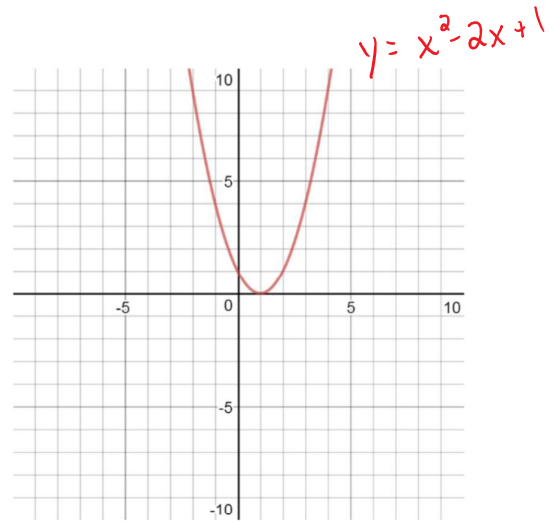← all you need to do for 1 mark

roots of a quadratic eqn
x-intercepts of a graph
zero(s) of a function
} all have the same value

$y = x^2 - 2x - 3$
$0 = x^2 - 2x - 3$
|
$y = 0$, where does the graph cross the x-axis

b) $x^2 - 2x + 1 = 0$

$y = x^2 - 2x + 1$

sol'n

$x = 1$

c) $x^2 + 1 = 0$

$x^2 = -1$

$\emptyset$

No sol'n

or

$\emptyset$

or

no real roots

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