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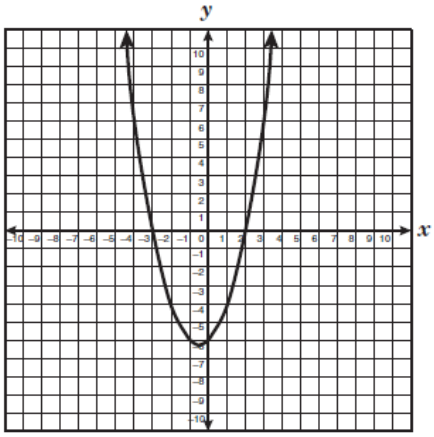
TAKS: Quadratics-Which Way Do They Ask This Time?
Student Worksheet

How do you know how to answer quadratic equations? The equations look alike but the questions are all a little different. Is there a way to work them all alike?

In the first question below, the graph is given for the function and the question asks for a zero of the function. By looking at the given graph, the student can look for the points at which the graph intersects the x-axis. The ordered pairs for these intersections are (-3, 0) and (2, 0). The possible zeros are -3 and 2.

14 The graph of $f(x) = x^2 + x - 6$ is shown below.



Which of the following is a zero of this function?

F –6

G 3

H –2

J 2

The zero that is given as an answer choice is 2.

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When students look at the graphs of any quadratics, the answers can be found by identifying the x-intercepts.

Look at equations given below and use the graphs to find the answers to the questions.

25 What are the roots of the quadratic equation $x^2 - 3x + 2 = 0$?

A –2 and –1
B –2 and 1
C 2 and –1
D 2 and 1

What are the roots? _____

31 In the equation $y = 2x^2 - 5x - 18$, which is a value of x when $y = 0$?

A -18
B $1\frac{1}{2}$
C 2
D $4\frac{1}{2}$

What is another term for the point where y=0 ? _____

15 What are the x-intercepts of the graph of the equation $y = x^2 + x - 12$?

A (4, 0), (3,0)
B (–4, 0), (3, 0)
C (4, 0), (–3, 0)
D (4, 0), (–3, 0)

Why are the answers given as ordered pairs?

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43 What is the solution set for the equation $2x^2 - 16x - 96 = 0$?

A $\{4, 12\}$
B $\{-4, 12\}$
C $\{-4, -12\}$
D $\{4, -12\}$

What are the solutions of the given equations?_____