READY, SET, GO! Name Period Date

READY

Topic: Standard form or Quadratic form

In each of the quadratic equations, $ax^2 + bx + c = 0$ **identify the values of a, b and c .**

1. $x^2 + 3x + 2 = 0$

   a =
   b =
   c =

2. $2x^2 + 3x + 1 = 0$

   a =
   b =
   c =

3. $x^2 - 4x - 12 = 0$

   a =
   b =
   c =

Write each of the quadratic expressions in factored form.

4. $x^2 + 3x + 2$

5. $2x^2 + 3x + 1$

6. $x^2 - 4x - 12$

7. $x^2 - 3x + 2$

8. $x^2 - 5x - 6$

9. $x^2 - 4x + 4$

10. $x^2 + 8x - 20$

11. $x^2 + x - 12$

12. $x^2 - 7x + 12$

mathematics vision project

SET

Topic: Radical notation and radical exponents

Each of the expressions below can be written using either radical notation, $\sqrt[n]{a^m}$ or rational exponents $a^{\frac{m}{n}}$. Rewrite each of the given expressions in the form that is missing. Express in most simplified form.

	Radical Form	Exponential Form
13.	$\sqrt[3]{5^2}$	
14.		$16^{\frac{3}{4}}$
15.	$\sqrt[3]{5^7 \cdot 3^5}$	
16.		$9^{\frac{2}{3}} \cdot 9^{\frac{4}{3}}$
17.	$\sqrt[5]{x^{13}y^{21}}$	
18.	$\sqrt[3]{27a^5b^2}$	
19.	$\sqrt[5]{\frac{32x^{13}}{243y^{15}}}$	
20.		$9^{\frac{3}{2}}s^{\frac{6}{3}}t^{\frac{1}{2}}$

Solve the equations below, use radicals or rational exponents as needed.

21. $(x+5)^4 = 81$

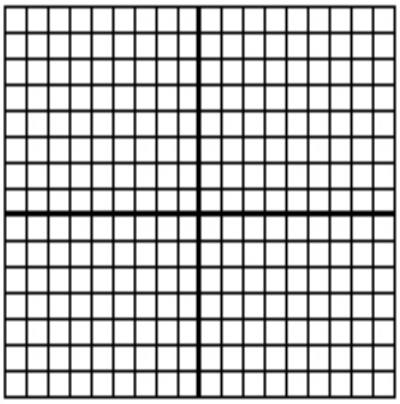
22. $2(x-7)^5 + 3 = 67$

GO

Topic: x-intercepts and y-intercepts for linear, exponential and quadratic functions

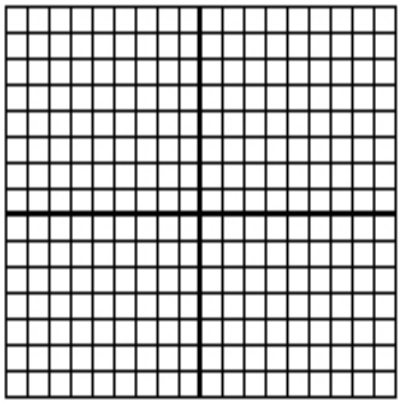
Given the function, find the x-intercept (s) and y-intercept if they exist and then use them to graph a sketch of the function.

23. $f(x) = (x + 5)(x - 4)$



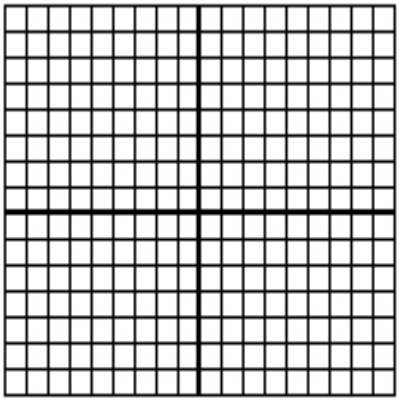
a. x-intercept(s): b. y-intercept:

24. $g(x) = 5(2^{x-1})$



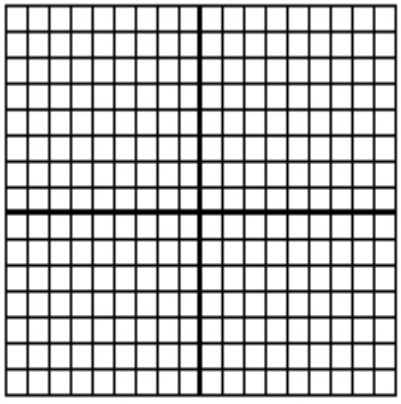
a. x-intercept(s): b. y-intercept:

25. $h(x) = -2(x + 3)$



a. x-intercept(s): b. y-intercept:

26. $k(x) = x^2 - 4$



a. x-intercept(s): b. y-intercept: