

## Ready, Set, Go!

## Ready

Topic: Simplifying radicals

Simplify each of the radicals below.

1.

$\sqrt{8}$

2.

$\sqrt{18}$

3.

$\sqrt{32}$

4.

$\sqrt{20}$

5.

$\sqrt{45}$

6.

$\sqrt{80}$

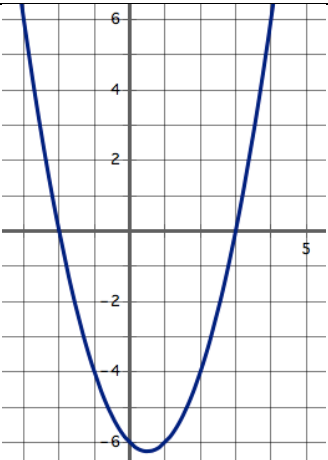
7. What is the connection between the radicals above? Explain.

## Set

Topic: Determine the nature of the x-intercepts for each quadratic below.

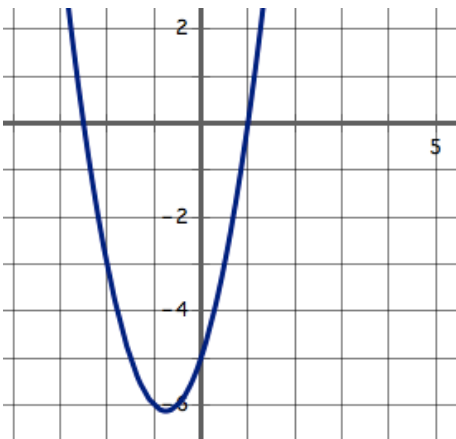
Given the quadratic function, its graph or other information below determine the nature of the x-intercepts. Explain or show how you know.

(Whole numbers "W", Integers "Z", Rational "Q", Irrational " $\bar{Q}$ ", not Real)

8. Determine the nature of the x-intercepts.	9. Determine the nature of the x-intercepts.
$f(x) = x^2 + 4x - 24$	

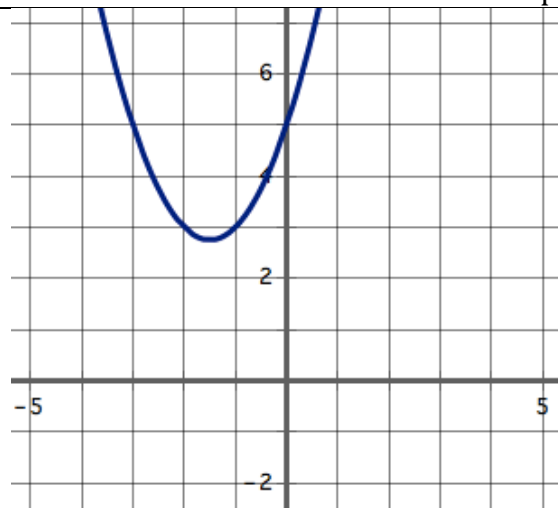


10. Determine the nature of the x-intercepts.



$$f(x) = 2x^2 + 3x - 5$$

11. Determine the nature of the x-intercepts.



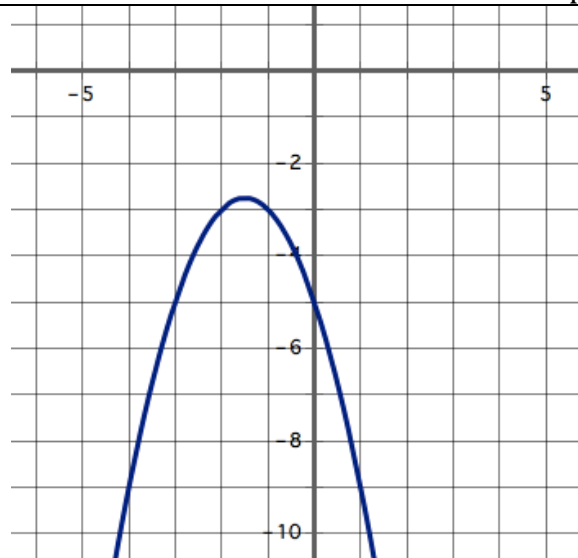
12. Determine the nature of the x-intercepts.

$$g(x) = (2x - 1)(5x + 2)$$

13. Determine the nature of the x-intercepts.

$$h(x) = 3x^2 - 5x + 9$$

14. Determine the nature of the x-intercepts.



15. Determine the nature of the x-intercepts.

$$r(t) = t^2 - 8t + 16$$



Determine the number of roots that each polynomial will have.

16.  $x^5 + 7x^3 - x^2 + 4x - 21$       17.  $4x^3 + 2x^2 - 3x - 9$       18.  $2x^7 + 4x^3 - 5x^2 + 16x + 3$

**Go**

Topic: Finding x-intercepts for quadratics using factoring and quadratic formula.

If the given quadratic function can be factored then factor and provide the x-intercepts. If you cannot factor the function then use the quadratic formula to find the x-intercepts.

16.  $A(x) = x^2 + 4x - 21$       17.  $B(x) = 5x^2 + 16x + 3$       18.  $C(x) = x^2 - 4x + 1$

19.  $D(x) = x^2 - 16x + 4$       20.  $E(x) = x^2 + 3x - 40$       21.  $F(x) = 2x^2 - 3x - 9$

22.  $G(x) = x^2 - 3x$       23.  $H(x) = x^2 + 6x + 8$       24.  $K(x) = 3x^2 - 11$

Need Assistance? Check out these additional resources:

[https://www.khanacademy.org/math/algebra/quadratics/quadratic\\_formula/v/quadratic-formula-1](https://www.khanacademy.org/math/algebra/quadratics/quadratic_formula/v/quadratic-formula-1)

