

Discriminant Homework

Name _____ Date _____

Discriminant: _____

- If the discriminant is positive you will have _____ roots
- If the discriminant is negative you will have _____ roots
- If the discriminant is zero you will have _____ roots

Directions: Use the discriminant to answer the following questions.

Find the type and number of solutions for each equation.

14. $4x^2 + 1 = 4x$

15. $x^2 + 2x = 10$

16. $2x - x^2 = 4$

Find the type and number of solutions for each equation.

30. $2x^2 + 5 = 2x$

31. $2x^2 - 3x = 8$

32. $2x^2 - 16x = -32$

33. $4x^2 - 28x = -49$

34. $3x^2 - 8x + 8 = 0$

35. $3.2x^2 - 8.5x + 1.3 = 0$

7._____ Which best describes the graph of a quadratic function with a discriminant of -3.

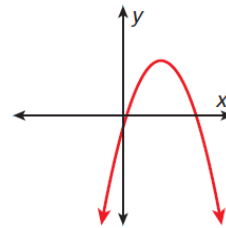
- A) Parabola with two x intercepts
- B) Parabola with two y intercepts
- C) Parabola with 1 x intercept
- D) Parabola with no x intercepts

8._____ What is the discriminant of the equation $2x^2 - 8x = 14$

- A) 48
- B) 176
- C) -176
- D) -48

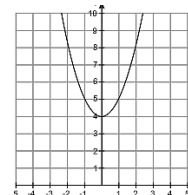
9._____ Which best describes the discriminant of the function whose graph is shown?

- A) Positive
- B) Negative
- C) Zero
- D) Undefined



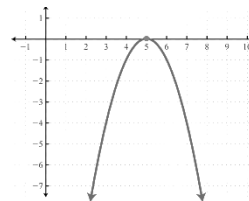
10._____ Which best describes the discriminant of the function whose graph is shown?

- A) Positive
- B) Negative
- C) Zero
- D) Undefined



11._____ Which best describes the discriminant of the function whose graph is shown?

- A) Positive
- B) Negative
- C) Zero
- D) Undefined



Solve each equation by factoring.

12. $x^2 - 25 = 0$

13. $x^2 + 9x + 14 = 0$

14. $6x^2 - x - 15 = 0$