

Math Worksheets

Quadratic Formula and the Discriminant

 Find the value of the discriminant of each quadratic equation.

1) $3x(x - 8) = 0$

11) $5x^2 + 2x - 3 = 0$

2) $2x^2 + 6x - 4 = 0$

12) $-3x^2 - 11x + 4 = 0$

3) $x^2 + 6x + 7 = 0$

13) $-6x^2 - 12x + 8 = 0$

4) $x^2 - x + 3 = 0$

14) $-x^2 - 9x - 12 = 0$

5) $x^2 + 4x - 3 = 0$

15) $7x^2 - 6x - 10 = 0$

6) $2x^2 + 6x - 10 = 0$

16) $-4x^2 - 2x + 8 = 0$

7) $3x^2 + 7x + 5 = 0$

17) $5x^2 + 8x - 2 = 0$

8) $x^2 - 6x - 4 = 0$


18) $6x^2 - 4x = 0$

9) $2x^2 + 8x + 3 = 0$

19) $3x^2 - 5x + 2 = 0$

10) $x^2 + 7x - 5 = 0$

20) $4x^2 + 9x + 3 = 0$

 Find the discriminant of each quadratic equation then state the number of real and imaginary solutions.

21) $-4x^2 - 16 = 16x$

25) $-11x^2 = -15x + 8$

22) $20x^2 = 20x - 5$

26) $3x^2 + 6x + 9 = 6$

23) $-11x^2 - 19x = 26$

27) $13x^2 - 5x - 12 = -26$

24) $22x^2 - 4x + 1 = 18x^2$

28) $-8x^2 - 32x - 25 = 7$

Answers of Worksheets

Quadratic formula and the discriminant

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|---------------------------------|---------------------------------|---------------------------------|---------|
| 1) 576 | 6) 116 | 11) 64 | 16) 132 |
| 2) 68 | 7) -11 | 12) 169 | 17) 104 |
| 3) 8 | 8) 52 | 13) 336 | 18) 16 |
| 4) -11 | 9) 40 | 14) 33 | 19) 1 |
| 5) 28 | 10) 69 | 15) 316 | 20) 33 |
| 21) 0, <i>one real solution</i> | 24) 0, <i>one real solution</i> | 27) -703, <i>no solution</i> | |
| 22) 0, <i>one real solution</i> | 25) -127, <i>no solution</i> | 28) 0, <i>one real solution</i> | |
| 23) -783, <i>no solution</i> | 26) 0, <i>one real solution</i> | | |

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