

Quadratic Test Review 2018

Date _____ Period _____

Find the value of the discriminant of each quadratic equation.

1) $p^2 + 3p + 17 = 10$

2) $-3x^2 - 2x - 9 = -6$

3) $-6n^2 - n - 11 = -4$

4) $-5n^2 + 8n - 12 = -10$

5) $7v^2 - 2v + 7 = 9$

Use the discriminant to determine the number of real solutions to each equation.

6) $6x^2 - 5x + 1 = 4$

7) $7x^2 + 5x + 7 = 6$

8) $5v^2 + v + 7 = 2$

9) $8p^2 - 2p + 2 = -3$

10) $4a^2 + 6a + 17 = 10$

Solve each equation with the quadratic formula.

11) $5r^2 = -4r + 1$

12) $3p^2 - 27 = 0$

13) $x^2 - 8x = -12$

14) $b^2 - 22 = -6$

15) $4n^2 - 2n - 122 = -12$

16) $5x^2 - 2x - 21 = 3$

17) $4r^2 - 6r - 58 = -4$

Find the Axis of Symmetry and the Vertex.

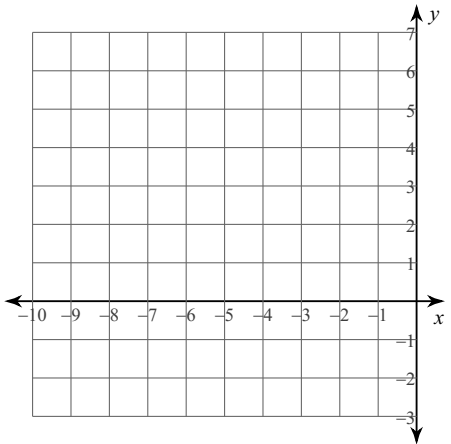
18) $3x^2 + 3x = 60$

19) $2p^2 - p = 10$

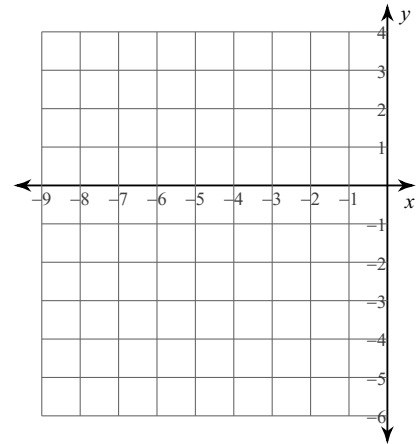
20) $5r^2 = -r + 48$

Sketch the graph of each function.

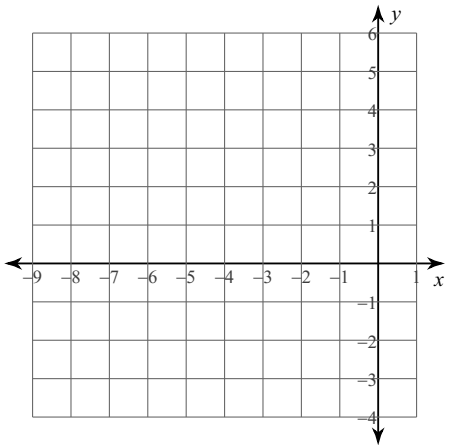
21) $y = 2x^2 + 12x + 16$



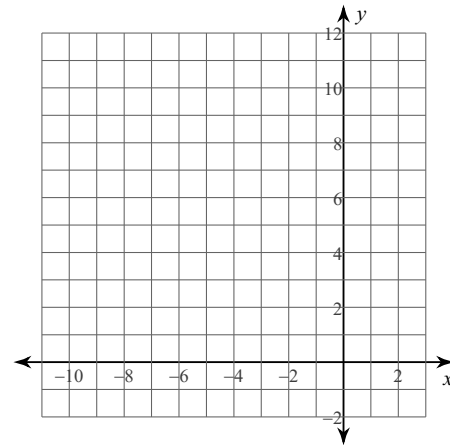
22) $y = -2x^2 - 16x - 29$



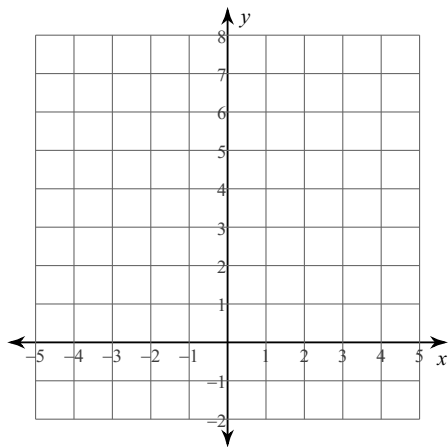
23) $y = 2x^2 + 8x + 5$



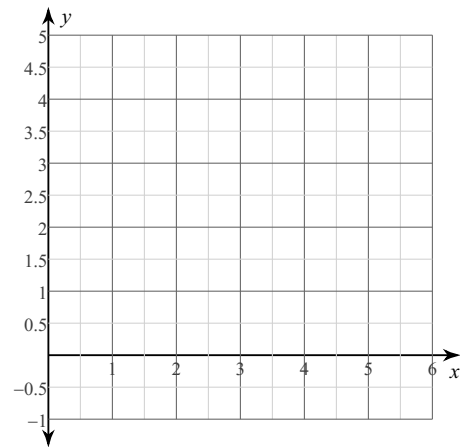
24) $y = 3x^2 + 12x + 11$



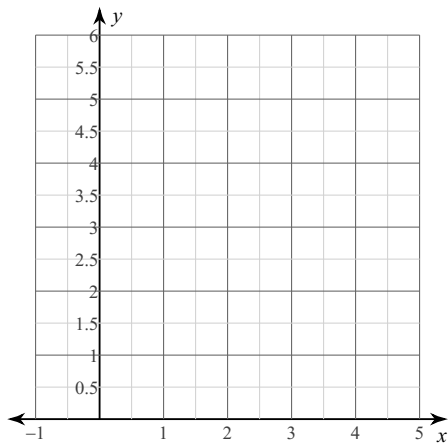
25) $y = 2x^2 + 4x + 1$



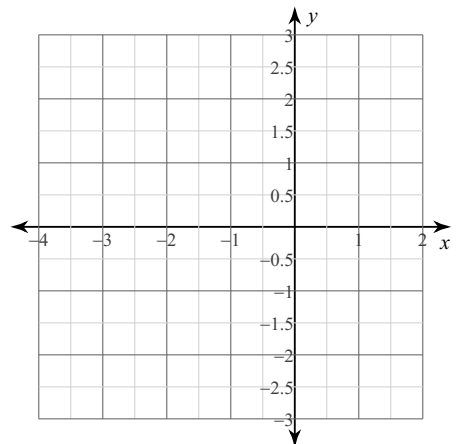
26) $y = -x^2 + 4x$



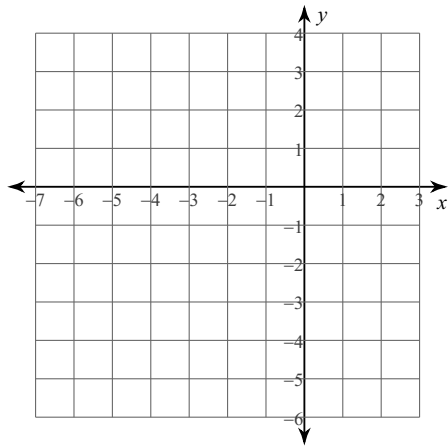
27) $y = x^2 - 4x + 5$



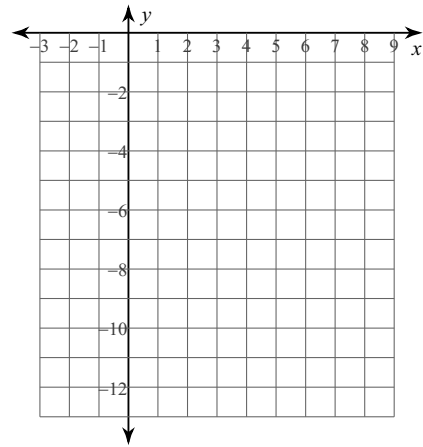
28) $y = x^2 + 2x - 1$



29) $y = -2x^2 - 8x - 5$



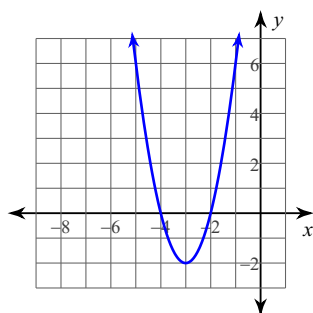
30) $y = -2x^2 + 12x - 22$



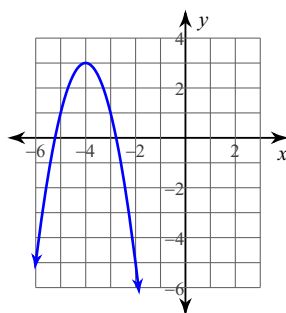
Answers to Quadratic Test Review 2018 (ID: 1)

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|--------------------------------------|-----------------|---------------------------------------|---------------------------------------|
| 1) -19 | 2) -32 | 3) -167 | 4) 24 |
| 5) 60 | 6) Two | 7) None | 8) None |
| 9) None | 10) None | 11) $\{0.2, -1\}$ | 12) $\{3, -3\}$ |
| 13) $\{6, 2\}$ | 14) $\{4, -4\}$ | 15) $\left\{\frac{11}{2}, -5\right\}$ | 16) $\left\{\frac{12}{5}, -2\right\}$ |
| 17) $\left\{\frac{9}{2}, -3\right\}$ | 18) $\{4, -5\}$ | 19) $\left\{\frac{5}{2}, -2\right\}$ | 20) $\left\{3, -\frac{16}{5}\right\}$ |

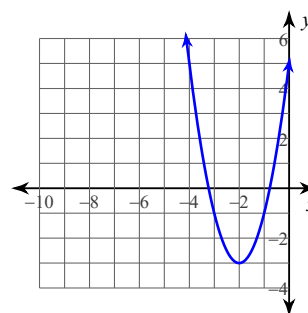
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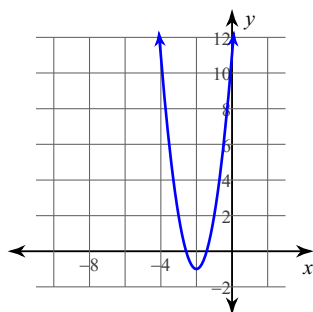
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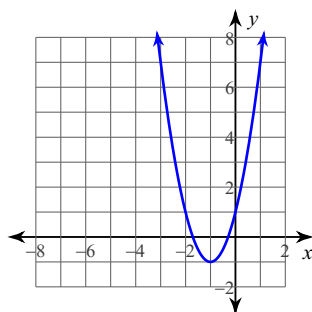
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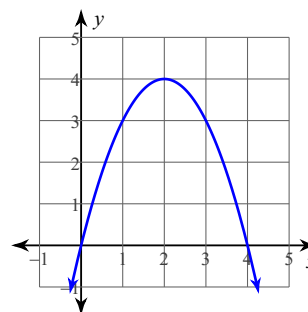
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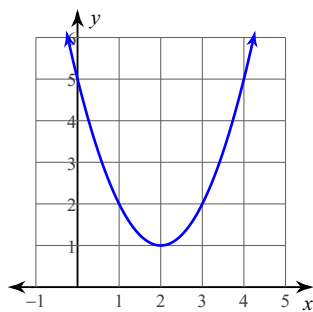
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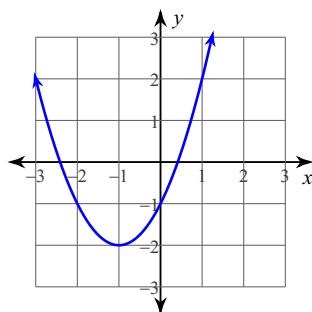
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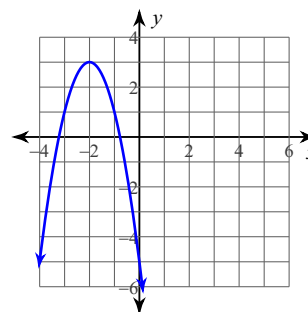
27)



28)



29)



30)

