Algebra 2 Name_____

Review for 3rd Quarter Final (part 2)

Date_____ Period____

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Simplify.

1) $(-5i)(2i)$

A) $-20i$ B) 10
C) $-12i$ D) -10

2) $(-i) \cdot 5 - (3i)$

A) $8i$ B) $2i$
C) $-8i$ D) $3 - 3i$

3) $(5i)(-4i)$

A) $-24i$ B) 20
C) $-28i$ D) -20

4) $2 - (i)(5i)$

A) -3 B) $2 - 6i$
C) 7 D) $2 - 4i$

5) $(-3i)(4i)$

A) -2 B) -4
C) 12 D) -12

6) $(-4i)(4i)$

A) $-16i$ B) 16
C) $-12i$ D) -16

7) $(-4i)(2 + 3i)$

A) $-12i$ B) $12 - 8i$
C) $-12 + 8i$ D) $12 - 16i$

8) $(-i)(-5 - 3i)$

A) $-3 - 5i$ B) $3 + 5i$
C) $-3 + 5i$ D) $15 + 9i$

9) $(4 + 4i)(5 - i)$

10) $(-3 - 5i)(-5 - 5i)$

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Algebra 2 Name *Answer Key*

Review for 3rd Quarter Final (part 2)

Date_____ Period____

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Simplify.

1) $(-5i)(2i)$

A) $-20i$ *B) 10
C) $-12i$ D) -10

2) $(-i)\cdot 5-(3i)$

A) $8i$ B) $2i$
*C) $-8i$ D) $3-3i$

3) $(5i)(-4i)$

A) $-24i$ *B) 20
C) $-28i$ D) -20

4) $2-(i)(5i)$

A) -3 B) $2-6i$
*C) 7 D) $2-4i$

5) $(-3i)(4i)$

A) -2 B) -4
*C) 12 D) -12

6) $(-4i)(4i)$

A) $-16i$ *B) 16
C) $-12i$ D) -16

7) $(-4i)(2+3i)$

A) $-12i$ *B) $12-8i$
C) $-12+8i$ D) $12-16i$

8) $(-i)(-5-3i)$

A) $-3-5i$ B) $3+5i$
*C) $-3+5i$ D) $15+9i$

9) $(4+4i)(5-i)$

$24+16i$

10) $(-3-5i)(-5-5i)$

$-10+40i$

Keep going there are a total of 12 pages to this document

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Algebra 2 Name_____

Review for 3rd Quarter Final

Date_____ Period____

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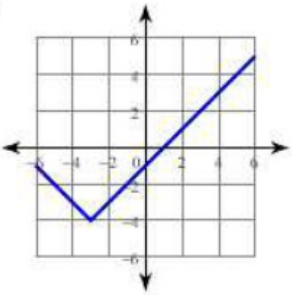
Graph each equation.

1) $y = |x + 3| + 4$

A)



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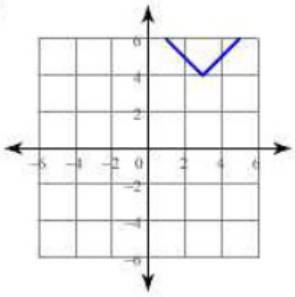

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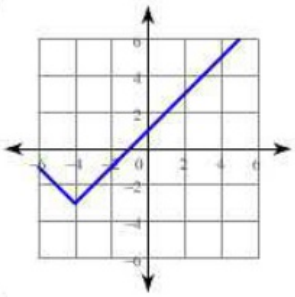

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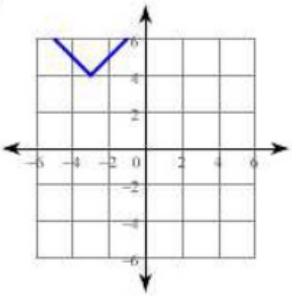
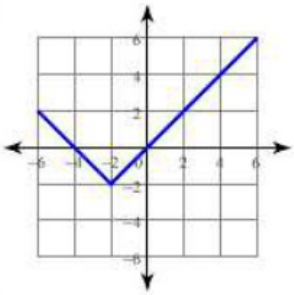


2) $y = |x + 2| - 2$

A)



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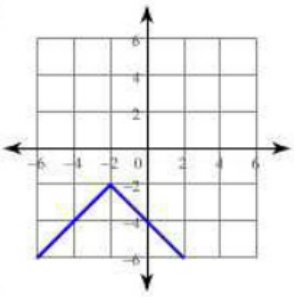

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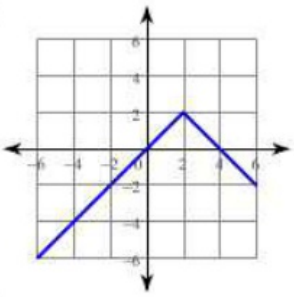

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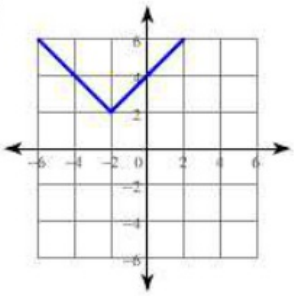

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Factor each completely.

3) $n^2 - 5n - 6$

A) $2(n-2)(n-6)$
B) $(n+1)(n-6)$
C) Not factorable
D) $(n+3)(n-9)$

4) $x^2 - 5x - 36$

A) $4(x+10)(x+7)$
B) $(x+4)(x-9)$
C) $(x-4)(x-9)$
D) $(x+4)(x+9)$

Solve each equation by factoring.

5) $(5n+1)(n-3)=0$

A) $\left\{-\frac{1}{5}, 3\right\}$ B) $\left\{-\frac{5}{3}, 0\right\}$
C) $\{-3\}$ D) $\{2, 0\}$

6) $(m-2)(4m-5)=0$

A) $\{4, -5\}$ B) $\left\{2, \frac{5}{4}\right\}$
C) $\left\{-5, \frac{5}{4}\right\}$ D) $\left\{1, -\frac{4}{3}\right\}$

7) $r^2 - 16 = 0$

A) $\{-4, 4\}$ B) $\{-3, 0\}$
C) $\{1, -4\}$ D) $\{-5, 4\}$

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

A) $\{-5, -1\}$ B) $\{-4\}$
C) $\{4\}$ D) $\{4, -2\}$

Solve each equation by taking square roots.

9) $3a^2 - 2 = 1$

A) $\{1, -1\}$ B) No solution.
C) $\{3, -3\}$ D) $\left\{\frac{\sqrt{11}}{3}, -\frac{\sqrt{11}}{3}\right\}$

10) $2v^2 - 2 = 0$

A) $\{1, -1\}$ B) No solution.
C) $\{1\}$ D) $\{2, -2\}$

Solve each equation with the quadratic formula.

11) $n^2 = 5 + n$

A) $\left\{\frac{1+\sqrt{21}}{2}, \frac{1-\sqrt{21}}{2}\right\}$
B) $\{-1, -2\}$
C) No solution.
D) $\left\{\frac{-1+\sqrt{21}}{2}, \frac{-1-\sqrt{21}}{2}\right\}$

12) $3x^2 - 6 = -x$

A) $\left\{\frac{1+\sqrt{73}}{6}, \frac{1-\sqrt{73}}{6}\right\}$
B) $\{3, -2\}$
C) $\left\{\frac{-1+\sqrt{73}}{6}, \frac{-1-\sqrt{73}}{6}\right\}$
D) No solution.

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13) $3p^2 - 2p = 3$

A) $\left\{\frac{-1+\sqrt{5}}{2}, \frac{-1-\sqrt{5}}{2}\right\}$

B) $\left\{\frac{-1+\sqrt{13}}{6}, \frac{-1-\sqrt{13}}{6}\right\}$

C) $\left\{\frac{-3+\sqrt{29}}{2}, \frac{-3-\sqrt{29}}{2}\right\}$

D) $\left\{\frac{1+\sqrt{10}}{3}, \frac{1-\sqrt{10}}{3}\right\}$

14) $k^2 - 2k = 4$

A) $\{1+\sqrt{2}, 1-\sqrt{2}\}$

B) $\left\{\frac{3+\sqrt{57}}{4}, \frac{3-\sqrt{57}}{4}\right\}$

C) $\{2, -4\}$

D) $\{1+\sqrt{5}, 1-\sqrt{5}\}$

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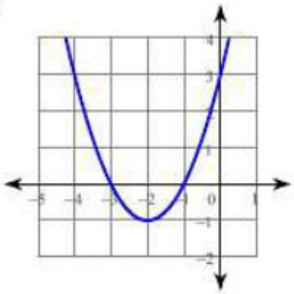
Sketch the graph of each function.

15) $f(x) = (x+2)^2 - 4$

A)



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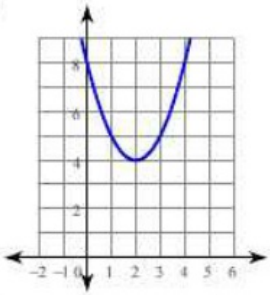

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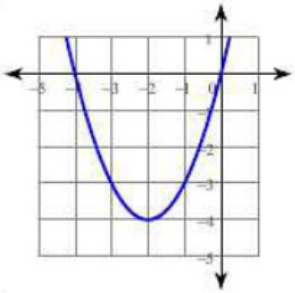

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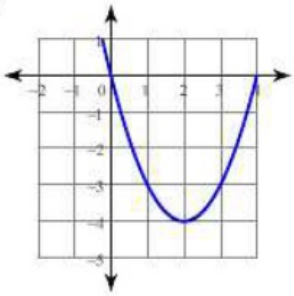
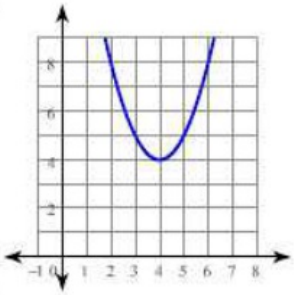


16) $f(x) = (x-4)^2 - 2$

A)



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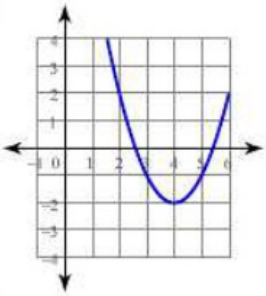

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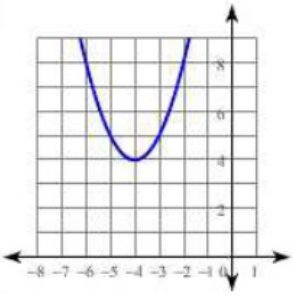

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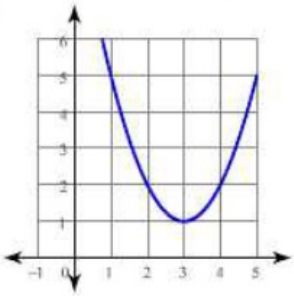

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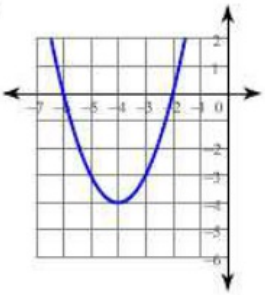
17) $f(x) = (x+1)^2 - 3$

A)



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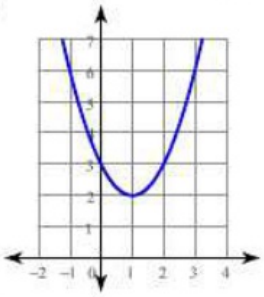

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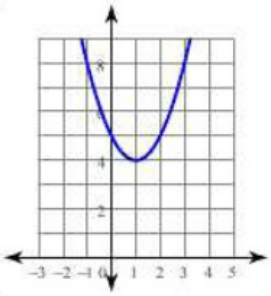

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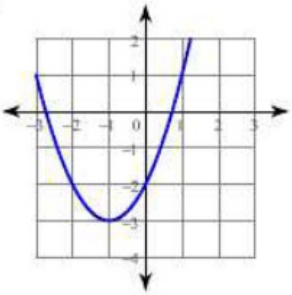
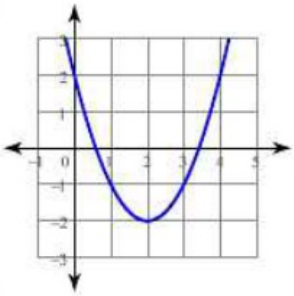


18) $f(x) = (x+3)^2 + 4$

A)



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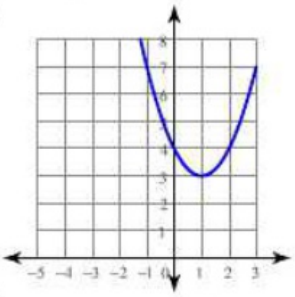

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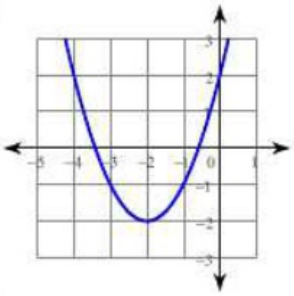
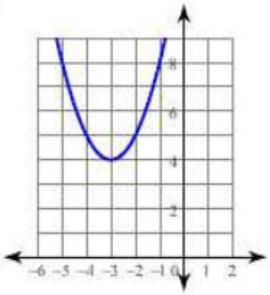


D)



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Algebra 2

Name *Answer Key*

Review for 3rd Quarter Final

Date_____ Period____

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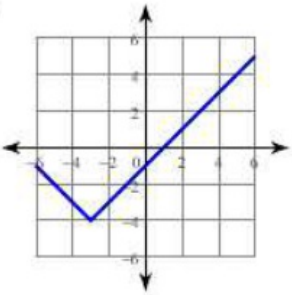
Graph each equation.

1) $y = |x + 3| + 4$

A)



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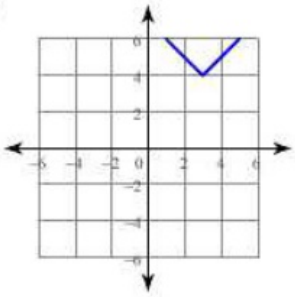
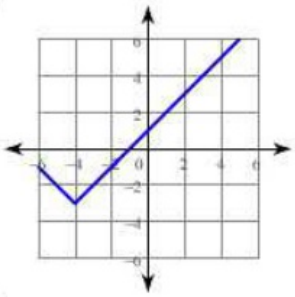
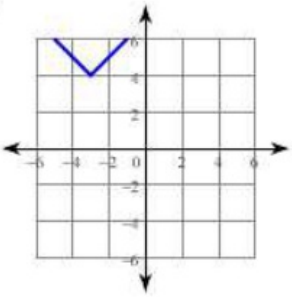


C)

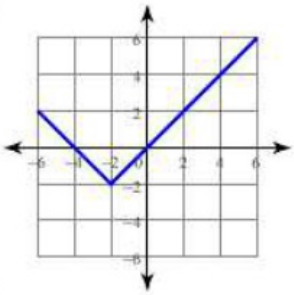


*D)

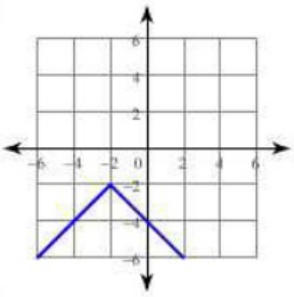


2) $y = |x + 2| - 2$

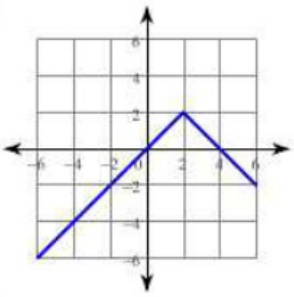
*A)



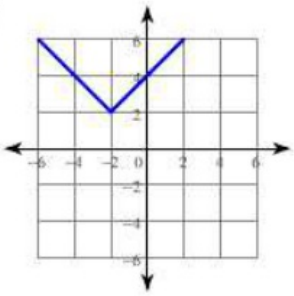
B)



C)



D)



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Answer Key

Factor each completely.

3) $n^2 - 5n - 6$

A) $2(n-2)(n-6)$
*B) $(n+1)(n-6)$
C) Not factorable
D) $(n+3)(n-9)$

4) $x^2 - 5x - 36$

A) $4(x+10)(x+7)$
*B) $(x+4)(x-9)$
C) $(x-4)(x-9)$
D) $(x+4)(x+9)$

Solve each equation by factoring.

5) $(5n+1)(n-3)=0$

*A) $\left\{-\frac{1}{5}, 3\right\}$
B) $\left\{-\frac{5}{3}, 0\right\}$
C) $\{-3\}$
D) $\{2, 0\}$

6) $(m-2)(4m-5)=0$

A) $\{4, -5\}$
*B) $\left\{2, \frac{5}{4}\right\}$
C) $\left\{-5, \frac{5}{4}\right\}$
D) $\left\{1, -\frac{4}{3}\right\}$

7) $r^2 - 16 = 0$

*A) $\{-4, 4\}$
B) $\{-3, 0\}$
C) $\{1, -4\}$
D) $\{-5, 4\}$

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

A) $\{-5, -1\}$
B) $\{-4\}$
*C) $\{4\}$
D) $\{4, -2\}$

Solve each equation by taking square roots.

9) $3a^2 - 2 = 1$

*A) $\{1, -1\}$
B) No solution.
C) $\{3, -3\}$
D) $\left\{\frac{\sqrt{11}}{3}, -\frac{\sqrt{11}}{3}\right\}$

10) $2v^2 - 2 = 0$

*A) $\{1, -1\}$
B) No solution.
C) $\{1\}$
D) $\{2, -2\}$

Solve each equation with the quadratic formula.

11) $n^2 = 5 + n$

*A) $\left\{\frac{1+\sqrt{21}}{2}, \frac{1-\sqrt{21}}{2}\right\}$
B) $\{-1, -2\}$
C) No solution.
D) $\left\{\frac{-1+\sqrt{21}}{2}, \frac{-1-\sqrt{21}}{2}\right\}$

12) $3x^2 - 6 = -x$

A) $\left\{\frac{1+\sqrt{73}}{6}, \frac{1-\sqrt{73}}{6}\right\}$
B) $\{3, -2\}$
*C) $\left\{\frac{-1+\sqrt{73}}{6}, \frac{-1-\sqrt{73}}{6}\right\}$
D) No solution.

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Answer Key

13) $3p^2 - 2p = 3$

A) $\left\{\frac{-1+\sqrt{5}}{2}, \frac{-1-\sqrt{5}}{2}\right\}$

B) $\left\{\frac{-1+\sqrt{13}}{6}, \frac{-1-\sqrt{13}}{6}\right\}$

C) $\left\{\frac{-3+\sqrt{29}}{2}, \frac{-3-\sqrt{29}}{2}\right\}$

*D) $\left\{\frac{1+\sqrt{10}}{3}, \frac{1-\sqrt{10}}{3}\right\}$

14) $k^2 - 2k = 4$

A) $\{1+\sqrt{2}, 1-\sqrt{2}\}$

B) $\left\{\frac{3+\sqrt{57}}{4}, \frac{3-\sqrt{57}}{4}\right\}$

C) $\{2, -4\}$

*D) $\{1+\sqrt{5}, 1-\sqrt{5}\}$

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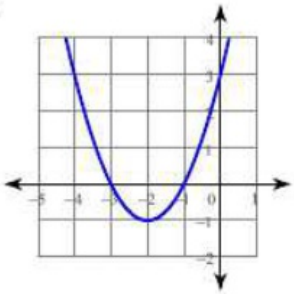
Answer Key

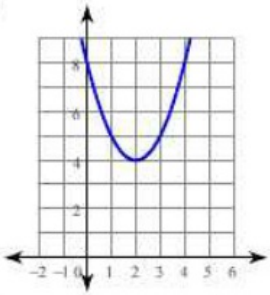
Sketch the graph of each function.

15) $f(x) = (x+2)^2 - 4$

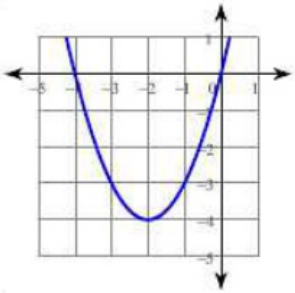
A)



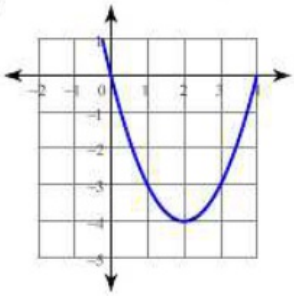
B)



*C)

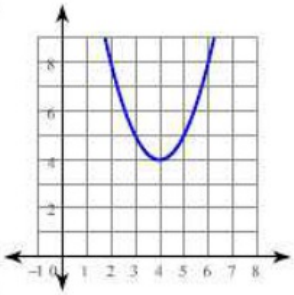


D)

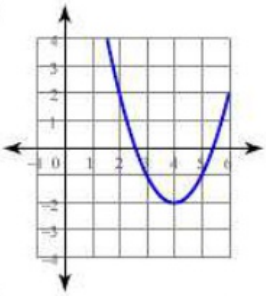


16) $f(x) = (x-4)^2 - 2$

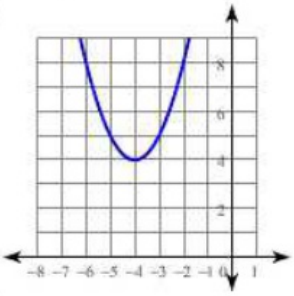
A)



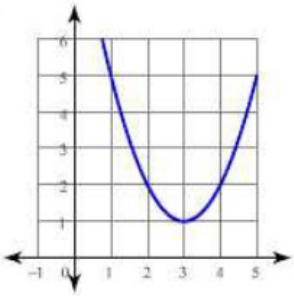
*B)



C)



D)



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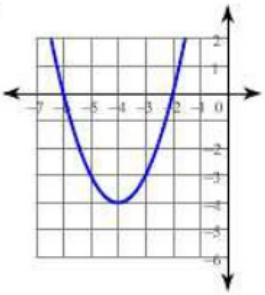
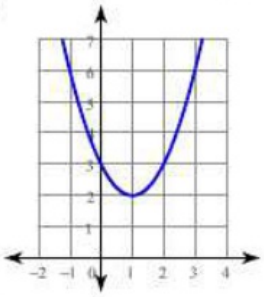
Answer Key

17) $f(x) = (x+1)^2 - 3$

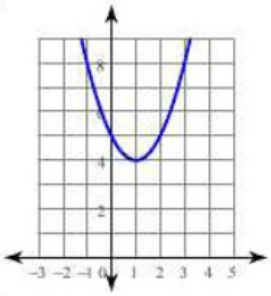
A)



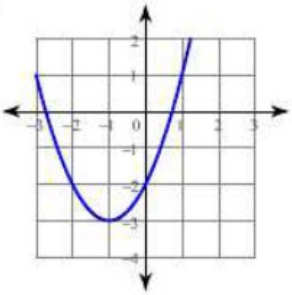
B)



C)

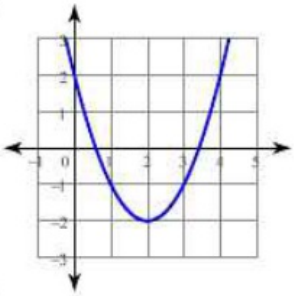


*D)

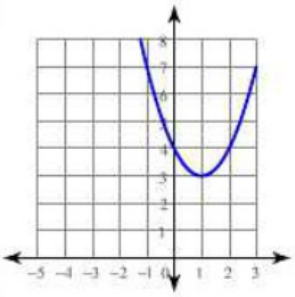


18) $f(x) = (x+3)^2 + 4$

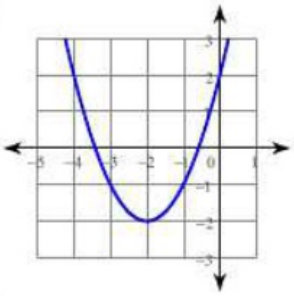
A)



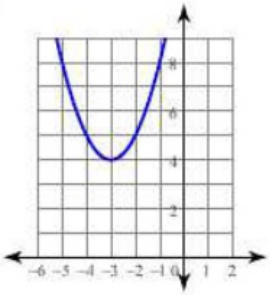
B)



C)



*D)



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