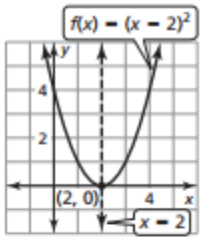
2.2 Practice A

ANSWER KEY

1.



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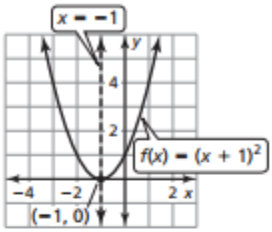

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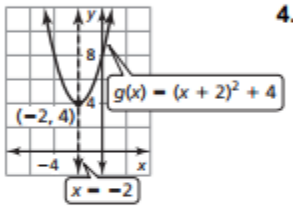

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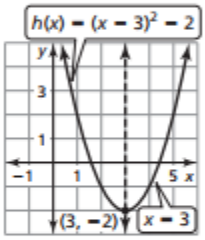

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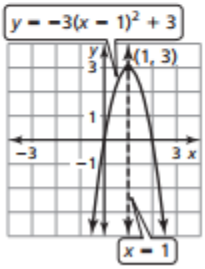

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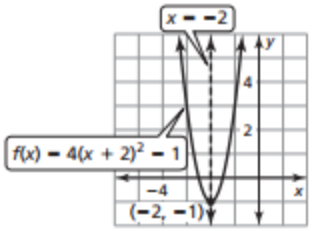
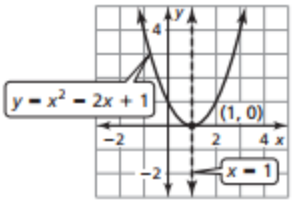
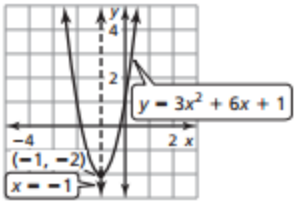

x = −2
y
4
2
f(x) = 4(x + 2)² − 1
−4
x
(−2, −1)

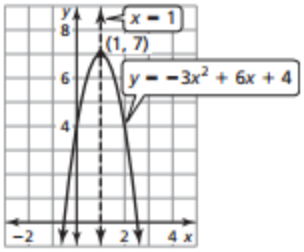
7.


y
4
y = x² − 2x + 1
(1, 0)
−2
2
4 x
−2
x = 1

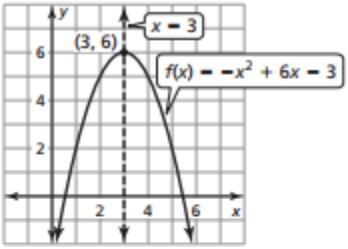
8.


y
4
2
y = 3x² + 6x + 1
−4
2 x
(−1, −2)
x = −1

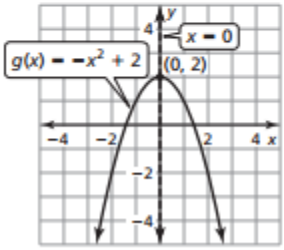
9.


y
x = 1
8
(1, 7)
6
y = −3x² + 6x + 4
4
−2
2
4 x

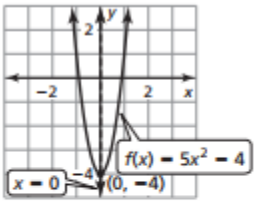
10.


y
x = 3
(3, 6)
6
f(x) = −x² + 6x − 3
4
2
2
4
6
x

11.


y
4
x = 0
g(x) = −x² + 2
(0, 2)
−4
−2
2
4 x
−2
−4

12.



13. Both graphs have the same axis of symmetry, $x = -2$.

14. C; It has the largest leading coefficient, $a = 3$.

15. Minimum Value: 2; D: $(-\infty, \infty)$; R: $[2, \infty)$; increasing to the right of $x = 0$; decreasing to the left of $x = 0$

16. Minimum Value: -3; D: $(-\infty, \infty)$; R: $[-3, \infty)$; increasing to the right of $x = 0$; decreasing to the left of $x = 0$

17. Maximum Value: 3; D: $(-\infty, \infty)$; R: $(-\infty, 3]$; increasing to the left of $x = 2$; decreasing to the right of $x = 2$

18. Maximum Value: 11; D: $(-\infty, \infty)$; R: $(-\infty, 11]$; increasing to the left of $x = 1$; decreasing to the right of $x = 1$

19. a. noon **b.** 75 customers