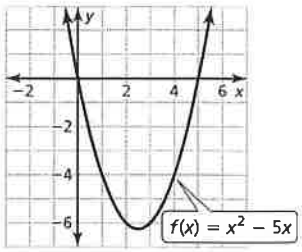
Answers

9. two real solutions; $x = 0$ and $x = 5$



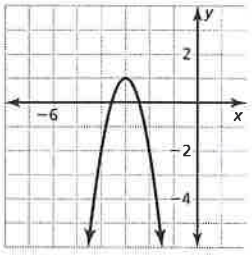
10. The average of the x-intercepts is the x-value of the vertex.

3.4 Puzzle Time

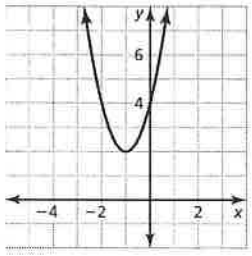
SOFA SO GOOD

3.5 Cumulative Practice

1.



2.



3.5 Prerequisite Skills Practice

1. $(2, -1)$

2. infinitely many solutions; Explanations will vary.

3.5 Extra Practice

1. $(0, -2)$ and $(4, -2)$

2. $(0, 6)$ and $(-2, 2)$

3. no solution

4. $(1, 3)$ and $(-2, -6)$

5. $(0, -9)$ and $(-3, 0)$

6. $(1, 2)$

7. $(1, -2)$ and $(-1, -2)$

8. $(1, 0)$

9. no solution

10. $(-3, -2)$ and $(2, 3)$

11. no solution

12. $(-8, 32)$ and $(2, 2)$

13. $(-4, 24)$ and $(-2, 12)$

14. $(3, -8)$ and $\left(\frac{7}{3}, -8\right)$

15. The horizontal line is tangent to the circle either at the top or the bottom.

3.5 Reteach

1. $(-2, -3)$

2. $(0, 3)$ and $(1, 2)$

3. $(1, -1)$ and $(4, 5)$

4. $(1, -3)$ and $(4, 0)$

5. $(1, 7)$ and $\left(-\frac{1}{4}, 7\right)$

6. $(0, -3)$

7. $(3, -8)$

8. $(-0.25, -7.5)$ and $(1, -10)$

9. $(3, 3)$ and $(1, 3)$

3.5 Enrichment and Extension

1. parabola; $y = \frac{9}{4}(x - 1)^2 - 3$

2. circle; $(x - 1)^2 + (y - 1)^2 = 8$

3. hyperbola; $\frac{(x + 2)^2}{5} - \frac{(y + 3)^2}{20} = 1$

4. parabola; $y = (x + 3)^2 - 4$

5. circle; $(x + 1)^2 + (y + 3)^2 = 25$

6. hyperbola: $\frac{(x + 1)^2}{9} - \frac{(y - 2)^2}{4} = 1$

3.5 Puzzle Time

SPUDNIK

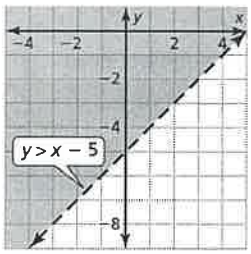
3.6 Cumulative Practice

1. $g(x) = \frac{5}{4}x - \frac{7}{4}$

2. $g(x) = \frac{1}{3}|3x + 7| + \frac{4}{3}$

3.6 Prerequisite Skills Practice

1.



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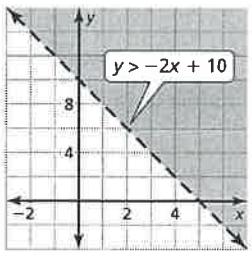
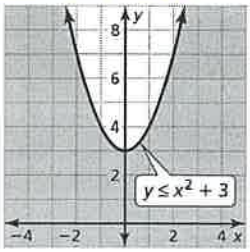


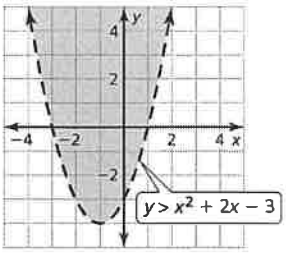
3.6 Extra Practice

1.



Answers

2.



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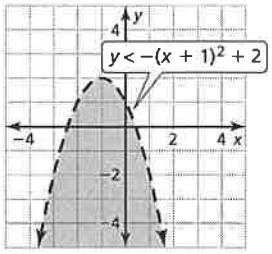

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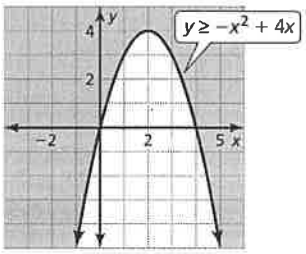
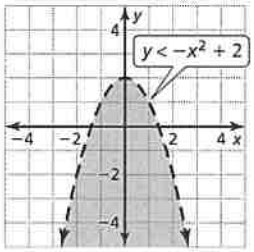
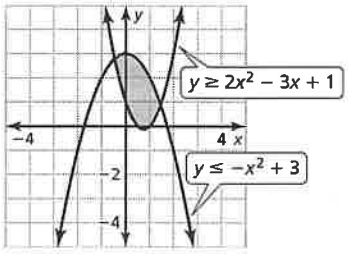


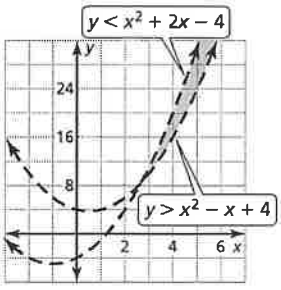
5. wrong side was shaded.



6.



7.



8. $x > \frac{1}{2}$ or $x < -6$ **9.** $\frac{1}{2} \leq x \leq 2$

10. $x \leq -3 - \sqrt{13}$ or $x \geq -3 + \sqrt{13}$

11. $-3 < x < 9$ **12.** $x < -2.64$ or $x > 1.14$

13. $-1.66 \leq x \leq 0.91$ **14.** $-3.24 \leq x \leq 1.24$

15. $x < -4.37$ or $x > 1.37$

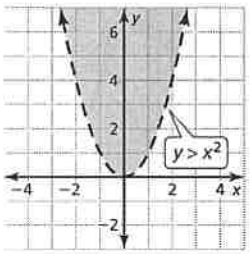
16. a. 25 ft; $h(t) = 25$ when $t = 0$.

b. $-16t^2 + 25 > 0$

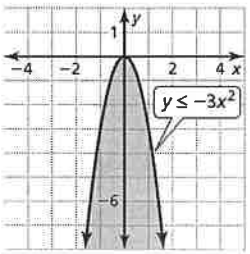
c. $0 < t < 1.25$

3.6 Reteach

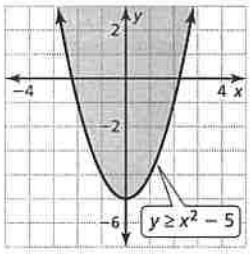
1.



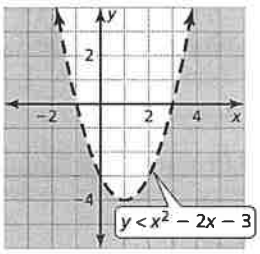
2.



3.



4.



5. $x < -\frac{4}{3}$ or $x > \frac{4}{3}$ **6.** $x \leq 1$ or $x \geq 7$

7. $-7 \leq x \leq -3$ **8.** $1 < x < \frac{9}{2}$

3.6 Enrichment and Extension

a.

Number of handbags purchased	Price per handbag (dollars)	Revenue per order (dollars)
1	368	368
2	366	732
3	364	1092
4	362	1448
5	360	1800
6	358	2148
⋮	⋮	⋮
x	$370 - 2x$	$x(370 - 2x)$