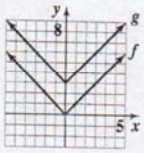
Section 2.5

Check Point Exercises

1.


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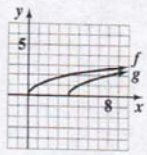

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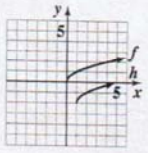

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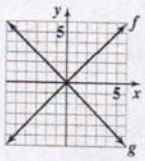

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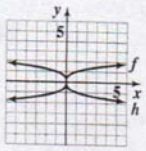

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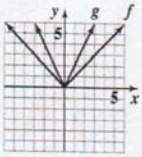
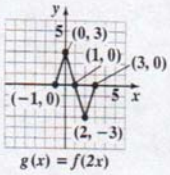
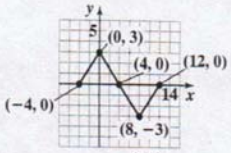
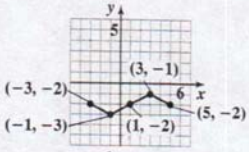


7. a.


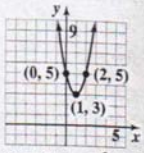
$g(x) = f(2x)$

b.


$h(x) = f\left(\frac{1}{2}x\right)$

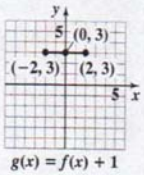
8.


$y = -\frac{1}{3}f(x + 1) - 2$

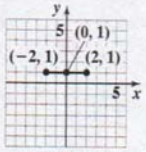
9.


$g(x) = 2(x - 1)^2 + 3$

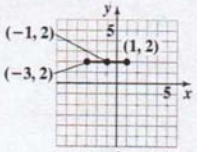
Exercise Set 2.5

1.


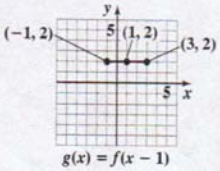
$g(x) = f(x) + 1$

2.


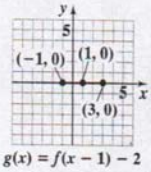
$g(x) = f(x) - 1$

3.


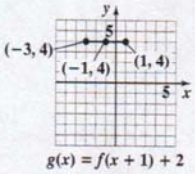
$g(x) = f(x + 1)$

4.


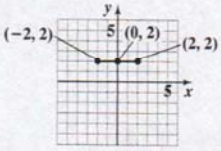
$g(x) = f(x - 1)$

5.


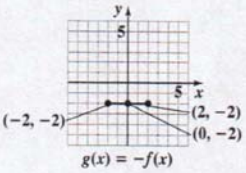
$g(x) = f(x - 1) - 2$

6.


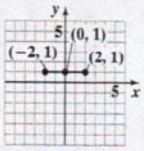
$g(x) = f(x + 1) + 2$

7.


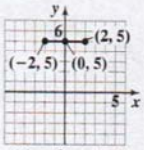
$g(x) = f(-x)$

8.


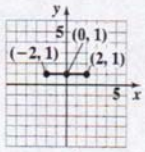
$g(x) = -f(x)$

9.


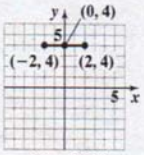
$g(x) = -f(x) + 3$

10.


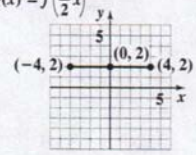
$g(x) = f(-x) + 3$

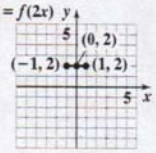
11.


$g(x) = \frac{1}{2}f(x)$

12.


$g(x) = 2f(x)$

13.
$g(x) = f\left(\frac{1}{2}x\right)$


14.
$g(x) = f(2x)$


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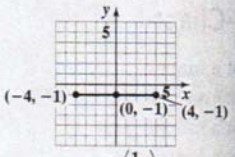
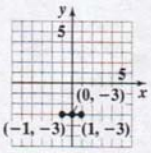
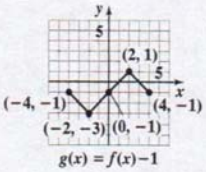


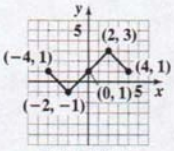
$g(x) = -f\left(\frac{1}{2}x\right) + 1$

16.


$g(x) = -f(2x) - 1$

17.


$g(x) = f(x) - 1$

18.


$g(x) = f(x) + 1$

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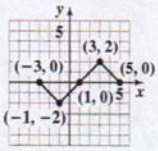
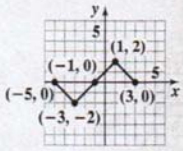
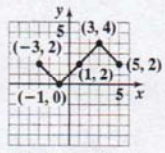


$g(x) = f(x - 1)$

20.


$g(x) = f(x + 1)$

21.


$g(x) = f(x - 1) + 2$

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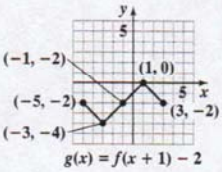
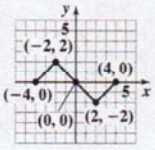
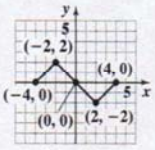


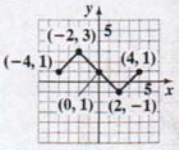
$g(x) = f(x + 1) - 2$

23.


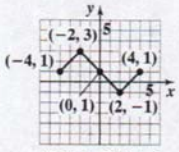
$g(x) = -f(x)$

24.


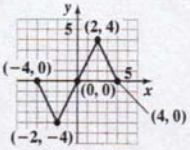
$g(x) = f(-x)$

25.


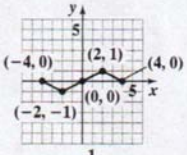
$g(x) = f(-x) + 1$

26.


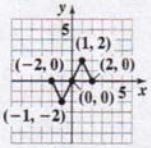
$g(x) = -f(x) + 1$

27.


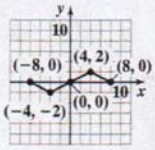
$g(x) = 2f(x)$

28.


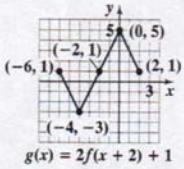
$g(x) = \frac{1}{2}f(x)$

29.


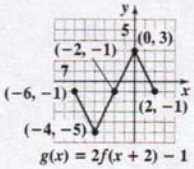
$g(x) = f(2x)$

30.


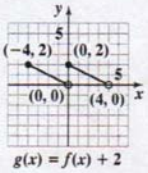
$g(x) = f\left(\frac{1}{2}x\right)$

31.


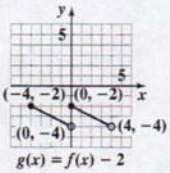
$g(x) = 2f(x + 2) + 1$

32.


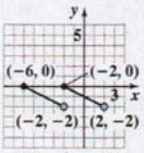
$g(x) = 2f(x + 2) - 1$

33.


$g(x) = f(x) + 2$

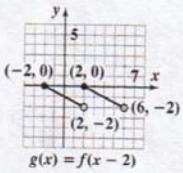
34.


$g(x) = f(x) - 2$

35.


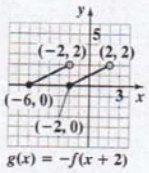
$g(x) = f(x + 2)$

36.



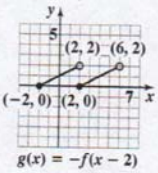
$g(x) = f(x - 2)$

37.



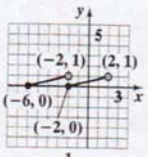
$g(x) = -f(x + 2)$

38.



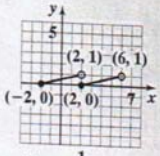
$g(x) = -f(x - 2)$

39.



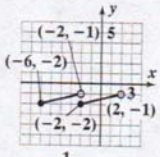
$g(x) = -\frac{1}{2}f(x + 2)$

40.



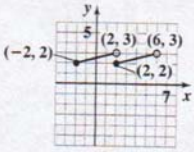
$g(x) = -\frac{1}{2}f(x - 2)$

41.



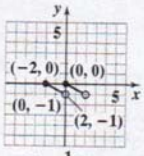
$g(x) = -\frac{1}{2}f(x + 2) - 2$

42.



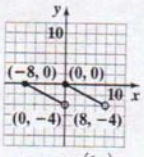
$g(x) = -\frac{1}{2}f(x - 2) + 2$

43.



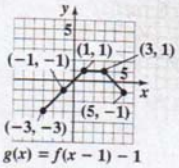
$g(x) = \frac{1}{2}f(2x)$

44.



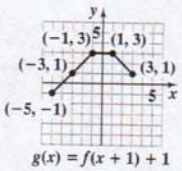
$g(x) = 2f\left(\frac{1}{2}x\right)$

45.



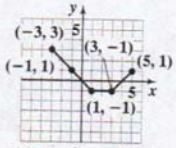
$g(x) = f(x - 1) - 1$

46.



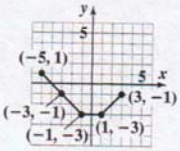
$g(x) = f(x + 1) + 1$

47.



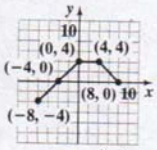
$g(x) = -f(x - 1) + 1$

48.



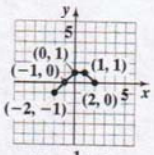
$g(x) = -f(x + 1) - 1$

49.



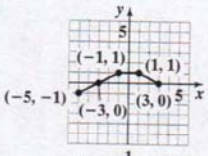
$g(x) = 2f\left(\frac{1}{2}x\right)$

50.



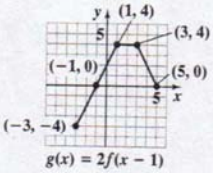
$g(x) = \frac{1}{2}f(2x)$

51.



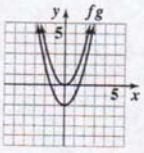
$g(x) = \frac{1}{2}f(x + 1)$

52.

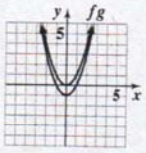


$g(x) = 2f(x - 1)$

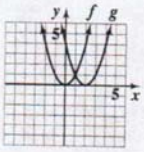
53.



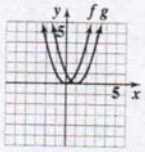
54.



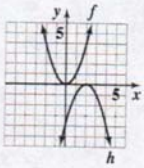
55.



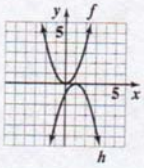
56.



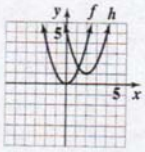
57.



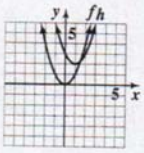
58.



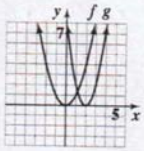
59.



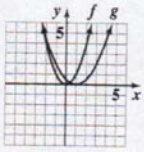
60.



61.



62.



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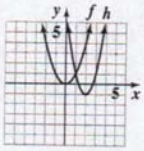

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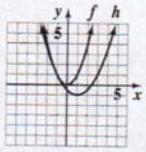

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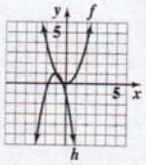

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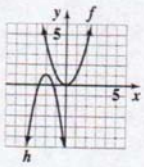

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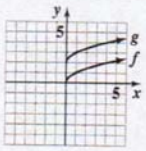

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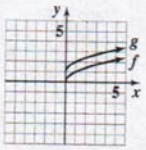

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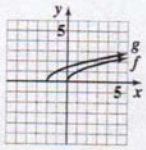

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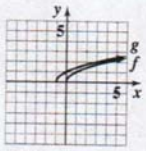

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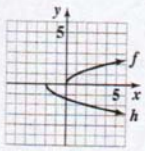

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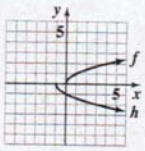

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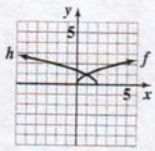

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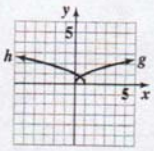

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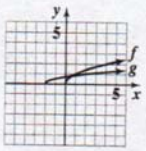

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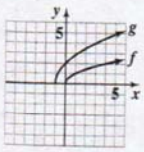

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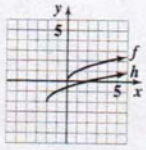

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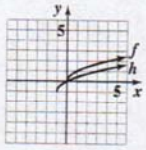

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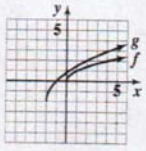

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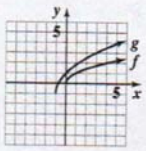

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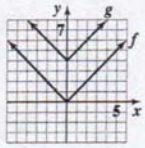

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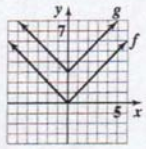

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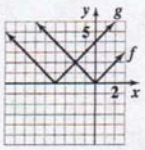

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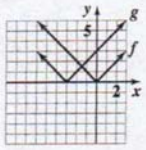

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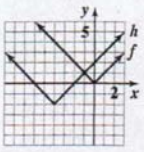

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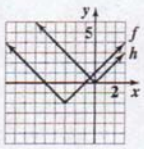

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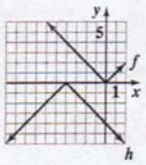

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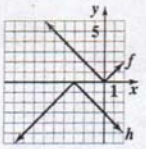

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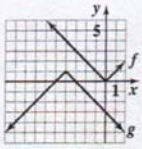

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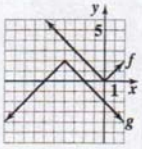

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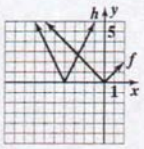

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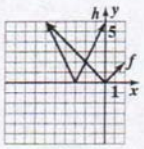

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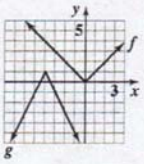

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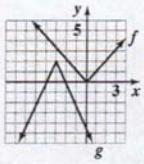

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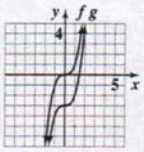

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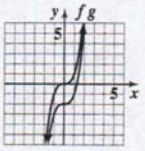

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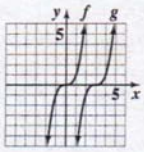

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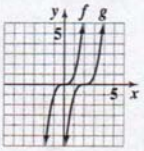

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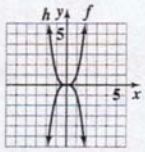

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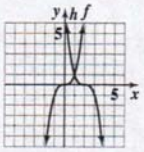

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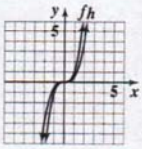

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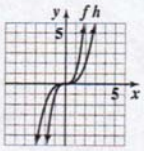

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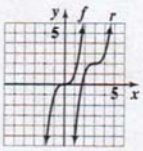

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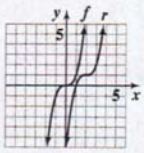

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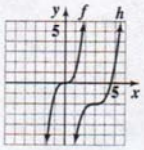
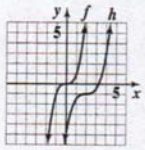


106.



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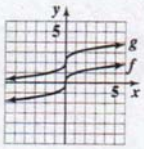

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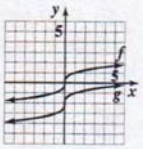

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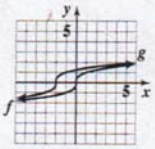

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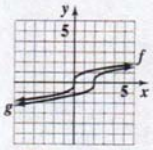

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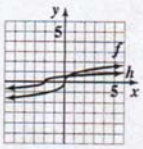

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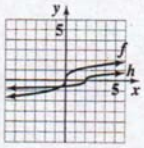

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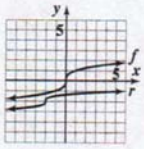

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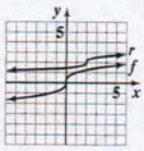

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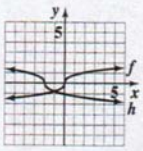

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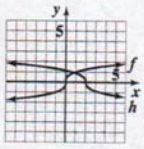

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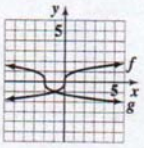

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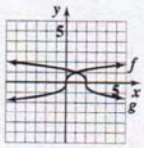

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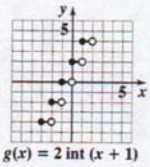
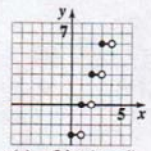


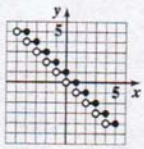
$g(x) = 2 \text{ int } (x + 1)$

120.



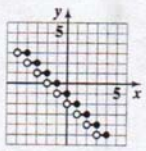
$g(x) = 3 \text{ int } (x - 1)$

121.



$h(x) = \text{int } (-x) + 1$

122.



$h(x) = \text{int } (-x) - 1$

123. $y = \sqrt{x - 2}$ **124.** $y = -x^3 + 2$ **125.** $y = (x + 1)^2 - 4$

126. $y = \sqrt{x - 2} + 1$ **127. a.** First, vertically stretch the graph of $f(x) = \sqrt{x}$ by the factor 2.9; then, shift the result up 20.1 units. **b.** 40.2 in.; very well **c.** 0.9 in. per month **d.** 0.2 in. per month; This is a much smaller rate of change; The graph is not as steep between 50 and 60 as it is between 0 and 10.

128. a. First, vertically stretch the graph of $f(x) = \sqrt{x}$ by the factor 3.1; then, shift the result up 19 units. **b.** 40.5 in.; very well **c.** 1.0 in. per month **d.** 0.2 in. per month; This is a much smaller rate of change; The graph is not as steep between 50 and 60 as it is between 0 and 10.