Name _____ Date _____ Class _____

Practice B
Piecewise Functions

Evaluate each piecewise function for $x = -8$ and $x = 5$.

1. $f(x) = \begin{cases} 2x & \text{if } x < 0 \\ 0 & \text{if } x \geq 0 \end{cases}$

2. $g(x) = \begin{cases} 2 - x & \text{if } x \leq 5 \\ -x^2 & \text{if } 5 < x < 8 \\ 6 & \text{if } 8 \leq x \end{cases}$
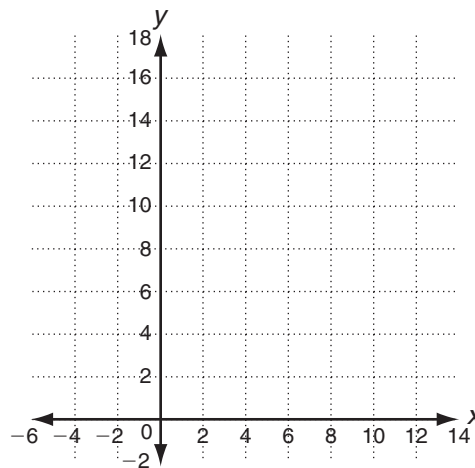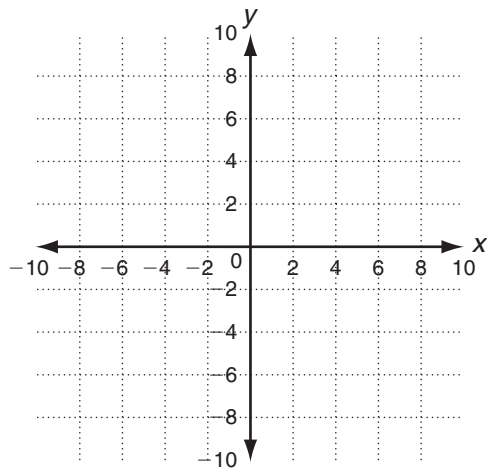
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3. $h(x) = \begin{cases} 2x + 4 & \text{if } x \leq -8 \\ -1 & \text{if } -8 < x < 5 \\ x^2 & \text{if } 5 \leq x \end{cases}$

4. $k(x) = \begin{cases} 15 & \text{if } x \leq -5 \\ x & \text{if } -5 < x < 1 \\ 7 - \dfrac{x}{2} & \text{if } 1 < x \end{cases}$

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Graph each function.

5. $f(x) = \begin{cases} 6 & \text{if } x < -2 \\ 3x & \text{if } -2 \leq x \end{cases}$

6. $g(x) = \begin{cases} 12 - x & \text{if } x \leq 5 \\ x + 2 & \text{if } 5 < x \end{cases}$

Solve.

7. An airport parking garage costs $20 per day for the first week. After that, the cost decreases to $17 per day.

  a. Write a piecewise function for the cost of parking a car for x days.

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  b. What is the cost to park for 10 days?

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  c. Ms. Anderson went on two trips. On the first, she parked at the garage for 5 days; on the second, she parked at the garage for 8 days. What was the difference in the cost of parking between the two trips?

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Holt Algebra 2