



## 5-2 Additional Practice

### Piecewise-Defined Functions

Write each absolute value function as a piecewise-defined function.

1.  $f(x) = 7|x|$

2.  $g(x) = -\frac{1}{3}|x|$

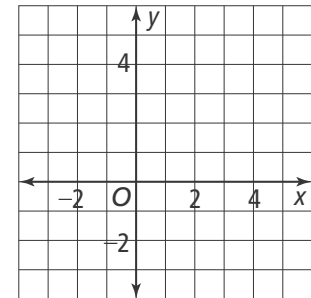
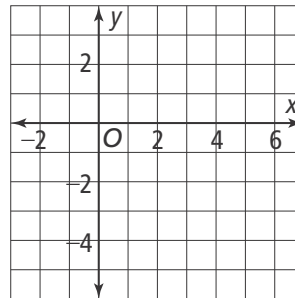
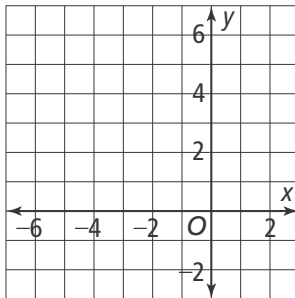
3.  $h(x) = 9|x|$

Which graph matches each piecewise-defined function?

4.  $f(x) = \begin{cases} -3x - 2, & x < 1 \\ -5, & x \geq 1 \end{cases}$

5.  $g(x) = \begin{cases} 2x + 3, & x \leq 1 \\ -x + 6, & x > 1 \end{cases}$

6.  $h(x) = \begin{cases} x + 4, & x < -2 \\ 2x + 6, & x \geq -2 \end{cases}$



7. A DJ is shopping for cloud storage for his music collection. He finds an online data storage cloud with the following monthly charges per GB (or fraction thereof): \$0.29/GB for  $0 < x \leq 25$  GB, \$0.26/GB for  $25 < x \leq 50$  GB, \$0.23/GB for  $50 < x \leq 75$  GB, and \$0.20/GB for  $x > 75$  GB. What is the difference in price for storing just the 75 GB and for storing 75 GB plus a new music collection that is 1 GB or less?