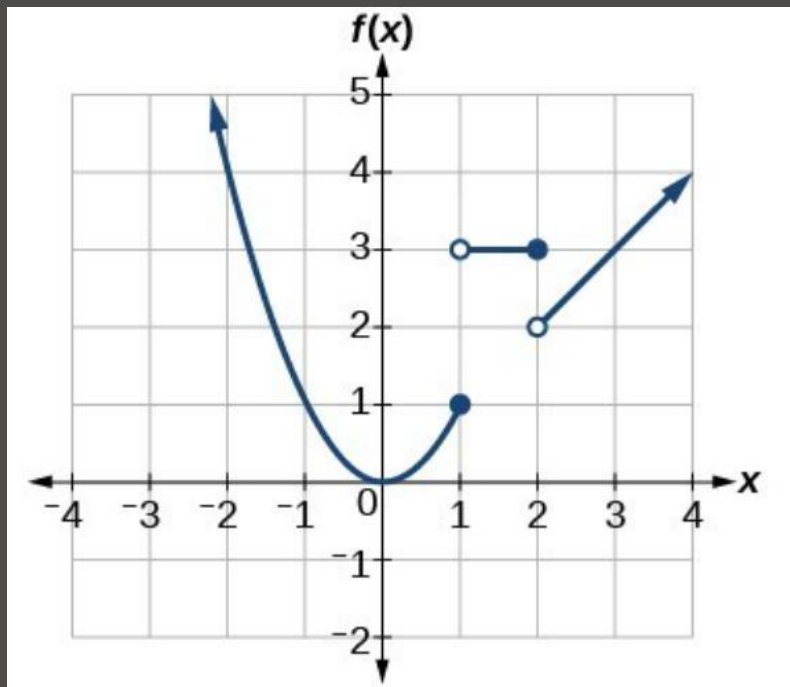


p.

1.4 PIECEWISE FUNCTIONS

A function that is defined using two or more equations for different intervals of the domain.



1. Evaluate given $f(x) = \begin{cases} \sqrt{20+x}, & \text{if } -8 < x < -1 \\ 3x^2 - 2x, & \text{if } -1 \leq x \leq 16 \\ |5 - 2x|, & \text{if } x > 16 \end{cases}$

a. $f(16)$

$$3(16)^2 - 2(16)$$
$$736$$
$$(16, 736)$$

b. $f(-2)$

$$\sqrt{20-2}$$
$$\sqrt{18}$$
$$3\sqrt{2}$$

c. $f(28)$

$$|5 - 2(28)|$$
$$|-51|$$
$$51$$



EVALUATE

$$f(x) = \begin{cases} -3x + 2 & x \leq 2 \\ \frac{1}{2}x^2 - 4 & x > 2 \end{cases}$$

$$g(x) = \begin{cases} |x + 1|, & \text{if } x < 1 \\ \sqrt{x + 3}, & \text{if } 1 \leq x \leq 6 \\ \frac{2}{3}x - 5, & \text{if } x > 6 \end{cases}$$

$$4. f(2) = -4$$

$$5. g(6) = 3$$

$$6. g(-1) = 0$$

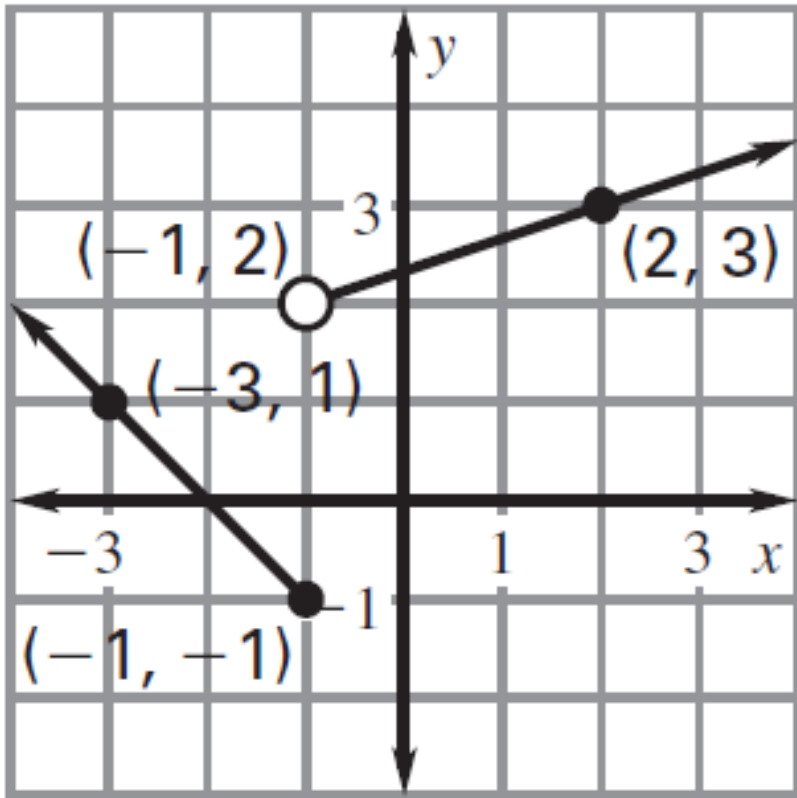
$$7. f(4) = 4$$

$$8. g(9) = 1$$

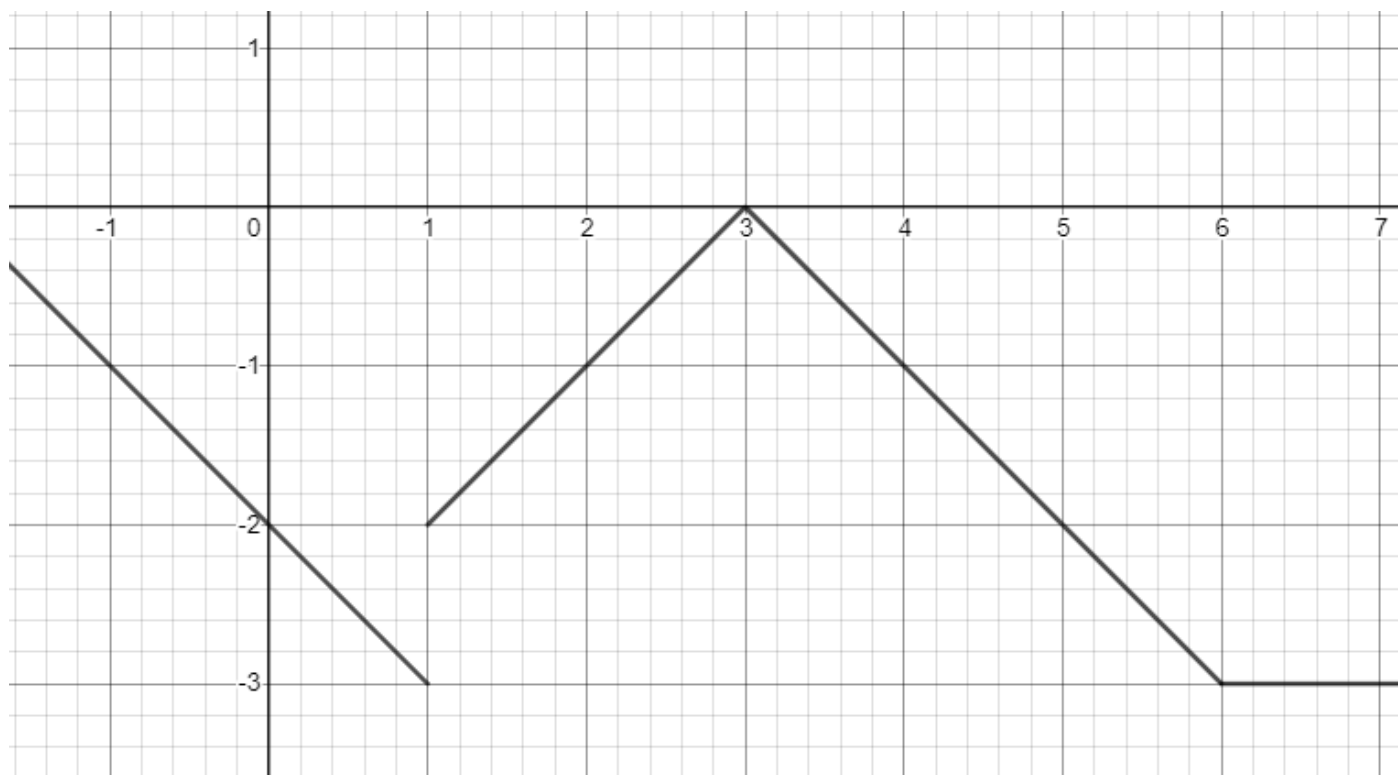
$$9. f(-4) = 14$$



4. Write the equation for the graph shown.



5. Write the equation for the graph shown.



6. Write the equation for the graph shown.

