

Name:

Date:

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## Alg2 HOMEWORK: Evaluate piecewise functions

Evaluate the function for the given value of x.

$$f(x) = \begin{cases} 3, & \text{if } x \leq 0 \\ 2, & \text{if } x > 0 \end{cases}$$

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

$$h(x) = \begin{cases} \frac{1}{2}x - 4, & \text{if } x \leq -2 \\ 3 - 2x, & \text{if } x > -2 \end{cases}$$

- |            |             |             |                                |
|------------|-------------|-------------|--------------------------------|
| 1. $f(2)$  | 2. $f(-4)$  | 3. $f(0)$   | 4. $f\left(\frac{1}{2}\right)$ |
| 5. $g(7)$  | 6. $g(0)$   | 7. $g(-1)$  | 8. $g(3)$                      |
| 9. $h(-4)$ | 10. $h(-2)$ | 11. $h(-1)$ | 12. $h(6)$                     |

Evaluate the functions for the given value of x.

$$m(x) = \begin{cases} \sqrt{x+7} & x < 3 \\ -x+5 & x \geq 3 \end{cases}$$

$$r(x) = \begin{cases} |2x-1| & x < 0 \\ \frac{1}{3}x-5 & x \geq 0 \end{cases}$$

- |             |            |             |              |
|-------------|------------|-------------|--------------|
| 13. $m(7)$  | 14. $m(2)$ | 15. $m(-3)$ | 16. $m(3)$   |
| 17. $r(-1)$ | 18. $r(0)$ | 19. $r(2)$  | 20. $r(-14)$ |

ANSWERS:

- 2
- 3
- 3
- 2
- 13
- 5
- 4
- 8
- 6
- 5
- 5
- 9
- 2
- 3
- 2
- 2
- 3
- 5
- 13/3
- 29