

Alg2 **HOMEWORK:** Evaluating Functions Worksheet

Use the given relation to answers # 1 – 4

$$\{(3, -4), (-2, 1), (7, 9), (-15, 4), (a, w)\}$$

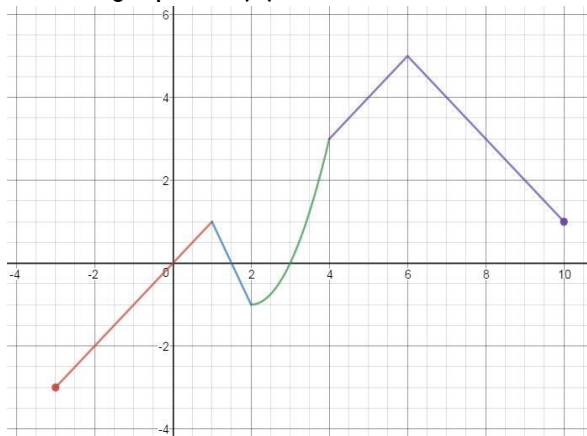
1. $f(-2)$	2. $f(3)$	3. $f(a)$	4. challenge $f(x) = 4$
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Use the given functions to answer # 5 – 12.

$f(x) = -2x^2 - x - 3$	$g(x) = \frac{1}{4}x - 3$	$h(x) = \sqrt{x-3} + 4$
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5. $f(3)$	6. $h(28)$	7. $g(2)$
8. $f\left(-\frac{1}{4}\right)$	9. $h(19)$	10. $g(12)$
11. Challenge: $g(x) = 7$		12. Challenge: $h(x) = 8$

Use the graph of $f(x)$ to evaluate # 13 – 20



13. $f(4)$	15. $f(-2)$	17. $f(3) + f(-3)$	19. $5f(2)$
14. $f(10)$	16. $f(8)$	18. $f(1) - f(5)$	Challenge 20. $f(x) = -1$

Use the given functions to answer #21 – 28

$$f(x) = x^2 - 5 \quad g(x) = 2x - 3 \quad h(x) = 1 - 4x$$

21. $(f - g)(x)$	22. $(f - g)(3)$	23. $h(5) - g(2)$	24. $f(x) \cdot g(x)$
25. $(g + f)(x)$	26. $(h - g)(-2)$	27. challenge $3f(x) - 2g(x)$	28. challenge $2g(x) = 5h(x)$

Answers:

1. 1
2. -4
3. w
4. -15
5. -24
6. 9
7. $-5/2$
8. $-23/8$
9. 8
10. 0
11. 40
12. 19
13. 3
14. 1
15. -2
16. 3
17. -3
18. -3
19. -5
20. -1
21. $x^2 - 2x - 2$
22. 1
23. -20
24. $2x^3 - 3x^2 - 10x + 15$
25. $x^2 + 2x - 8$
26. 16
27. $3x^2 - 4x - 9$
28. $11/24$