



MAth on the Fly!



NAME: _____ DATE: _____

Evaluating and Plugging into Functions

Evaluate and find each function value.

1. $f(x) = -x^2 + 2x - 1$

- a. Find $f(-3)$
- b. Find $f(1)$
- c. Find $f(a)$

2. $f(x) = \frac{1}{x} + x$

- a. Find $f(1/2)$
- b. Find $f(2)$
- c. Find $f(m)$

3. $f(x) = \sqrt{x + 10}$

- a. Find $f(-1)$
- b. Find $f(6)$
- c. Find $f(x - 2)$

4. $f(x) = -x - 5$

- a. Find $f(-7)$
- b. Find $f(5)$
- c. Find $f(x + 1)$

5. $f(x) = 3^{x+3}$

- a. Find $f(-4)$
- b. Find $f(-3)$
- c. Find $f(1)$

6. $f(x) = 2x + 7$

- a. Find $f(4x)$
- b. Find $f(x + 4)$
- c. Find $f(4 - x)$

7. $f(x) = |1 - 6x|$

- a. Find $f(-1.5)$
- b. Find $f(2/3)$
- c. Find $f(3x)$
- d. Find $f(x - 1)$

8. $f(x) = 2x^2 - 3x + 4$

- a. Find $f(-1)$
- b. Find $f(2)$
- c. Find $f(-x)$
- d. Find $f(2x)$

SOLUTIONS

1. a. $f(-3) = -16$
b. $f(1) = 0$
c. $f(a) = -a^2 + 2a - 1$

2. a. $f(1/2) = 5/2$ or 2.5
b. $f(2) = 5/2$ or 2.5
c. $f(m) = \frac{1}{m} + m$

3. a. $f(-1) = 3$
b. $f(6) = 4$
c. $f(x-2) = \sqrt{x-2+10}$
 $= \sqrt{x+8}$

4. a. $f(-7) = 2$
b. $f(5) = -10$
c. $f(x+1) = -(x+1) - 5$
 $= -x - 6$

5. a. $f(-4) = 3^{-1} = 1/3$
b. $f(-3) = 3^0 = 1$
c. $f(1) = 3^4 = 81$

6. a. $f(4x) = 2(4x) + 7$
 $= 8x + 7$
b. $f(x+4) = 2(x+4) + 7$
 $= 2x + 15$
c. $f(4-x) = 2(4-x) + 7$
 $= -2x + 15$
or
 $= 15 - 2x$

7. a. $f(-1.5) = 10$
b. $f(2/3) = 3$
c. $f(3x) = |1 - 6(3x)|$
 $= |1 - 18x|$
d. $f(x-1) = |1 - 6(x-1)|$
 $= |-6x + 7|$
or
 $= |7 - 6x|$

8. a. $f(-1) = 9$
b. $f(2) = 6$
c. $f(-x) = 2(-x)^2 - 3(-x) + 4$
 $= 2x^2 + 3x + 4$
d. $f(2x) = 2(2x)^2 - 3(2x) + 4$
 $= 8x^2 - 6x + 4$