

**FINAL REVIEW WORKSHEET  
COLLEGE ALGEBRA**

**Chapter 1.**

1. Given the following equations, which are functions?

- (A)  $y^2 = 1 - x^2$       (B)  $y = 9$       (C)  $y = x^3 - 5x$   
(D)  $5x + 2y = -10$       (E)  $y = \pm\sqrt{1 - 2x}$       (F)  $y = \frac{3}{x} + 5$

- a. all of the above      b. none of the above      c. B, C, D, and F  
d. C, D, F      e. C only      f. C and F

2. Given  $f(x) = \frac{x^2 - 1}{x + 4}$ , find  $f(-3)$ .

- a. -10      b. 10      c. -8      d. 8      e.  $\frac{8}{7}$

3. Given  $f(x) = \frac{x^2 + 3}{x - 5}$ , find  $f(\frac{1}{4})$

- a.  $\frac{49}{76}$       b.  $-\frac{49}{76}$       c.  $-\frac{47}{84}$       d.  $\frac{47}{84}$

4. What is the domain of this function:  $f(x) = \sqrt{x^2 - x - 2}$

- a.  $(-\infty, -1] \cup [2, \infty)$       b.  $(\infty, -2] \cup [1, \infty)$       c.  $(-2, 1)$       d.  $[-1, 2]$

5. What is the domain of this function:  $f(x) = \frac{3 - x}{x + 5}$

- a.  $(-\infty, -5) \cup (3, \infty)$       b.  $x \neq -5, x \neq 3$       c.  $x \neq -5$       d.  $(-5, 3)$

6. What is the range of this function:  $y = x^2 - 5$

- a.  $(-\infty, \infty)$       b.  $[5, \infty)$       c.  $[-5, \infty)$       d.  $(-\infty, -5]$