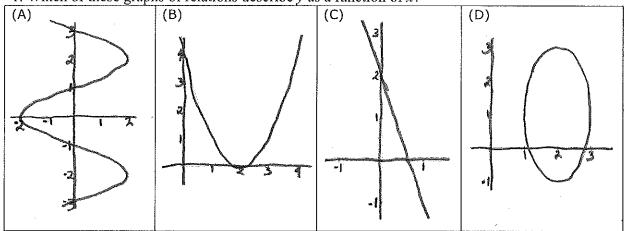
1. Which of these graphs of relations describe y as a function of x?



- 2. Find the distance between the pair of points. Give an exact answer. (-7, -6) and (7, 6).
- 3. Find the midpoint of the segment having the given end points. (-8,0) and (7,1)
- 4. Find the domain of the functions:

$$f(x) = \frac{1}{x^2 + 4x - 5}$$

- 5. The function H described by H(x)=2.75x+71.48 can be used to estimate the height, in centimeters, of a woman whose humerus (the bone from the elbow to the shoulder) is x cm long. Estimate the height of a woman whose humerus is 33.01 cm long.
- 6. For the pair of functions, find the sum, difference, product and quotient. State the domain of the resulting functions.

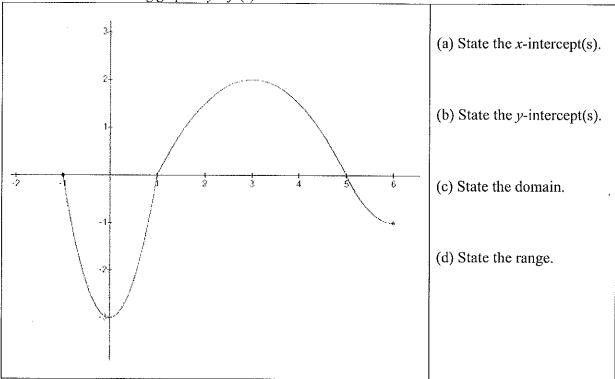
$$f(x)=7x-8, g(x)=6x+3$$

7. Let 
$$y = -3x^2 + 12$$

- (a) Find the x-intercept(s) of the graph of the equation, if any exist.
- (b) Find the y-intercept(s) of the graph of the equation, if any exist.
- (c) Graph this equation. Show at least six points.
- (d) Is the graph symmetric with respect to the y-axis?
- (e) Is the graph symmetric with respect to the x-axis.
- (f) Is the graph symmetric with respect to the origin?

y	(x, y)
	-
	y

8. Consider the following graph of y = f(x).



9. Let 
$$f(x) = \frac{x+11}{(x-4)^2}$$

- (a) Calculate f(-2).
- (b) Find f(a + 4) and simplify as much as possible.
- 10. For income x (in dollars), a particular state's income tax T (in dollars) is given by

$$T(x) = \begin{cases} 0.028x & if \quad 0 \le x \le 2,500 \\ 70 + 0.035(x - 2500) & if \quad 2,500 < x \le 7,500 \\ 245 + 0.050(x - 7,500) & if \quad x > 7,500 \end{cases}$$

- (a) What is the tax on an income of \$6,500?
- (b) What is the tax on an income of \$65,000?

A sales person is paid \$200 per week plus 5% commission on her weekly pay, Sales of the dollars. Find a linear function that represents her total weekly pay, (in dollars) in terms of the what must her weekly sales be in order by (in dollars) in terms of the week? For her to earn \$475.00 for the week?