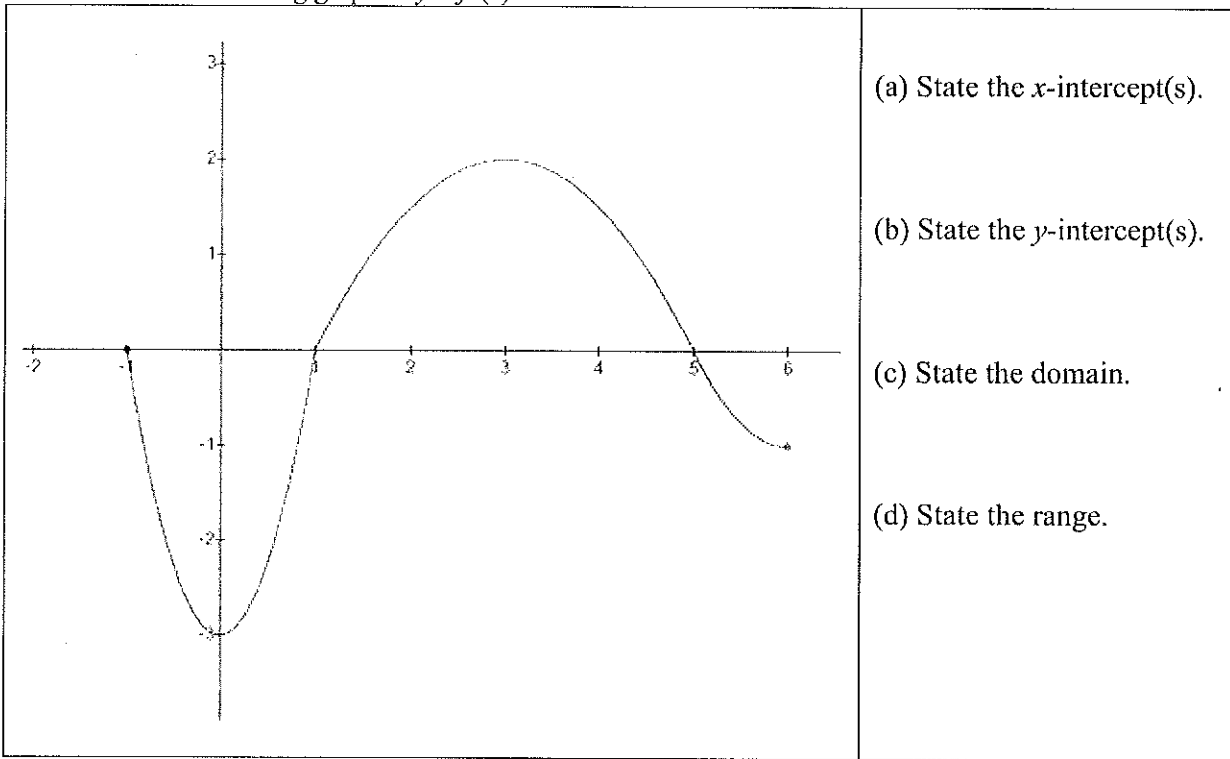


8. Consider the following graph of $y = f(x)$.



(a) State the x -intercept(s).

(b) State the y -intercept(s).

(c) State the domain.

(d) State the range.

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

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

(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 sales of r dollars. Find a linear function that represents her total weekly pay, W_r (in dollars) in terms of r . What must her weekly sales be in order for her to earn \$475.00 for the week?