

**I: TRIGONOMETRIC FUNCTIONS**

1. What is the reference angle for a  $273^\circ$  angle?

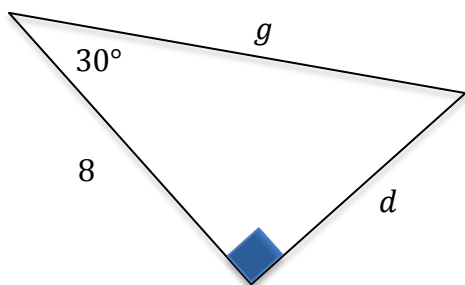
2. Convert the following angles

a.  $36^\circ$  to radians

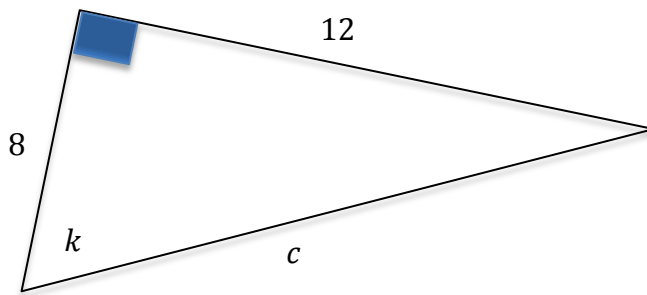
b.  $\frac{5}{12}\pi$  radians to degrees

3. Find the missing measurement

a. Find  $g$  and  $d$  to the nearest tenth



- b. Find  $k$  to the nearest tenth of a degree. Find the value of  $c$  and leave your answer as a reduced radical.



4. Give the function  $f(x) = -6 \sin 4(x - \pi) - 3$
- a. Find the period of the function

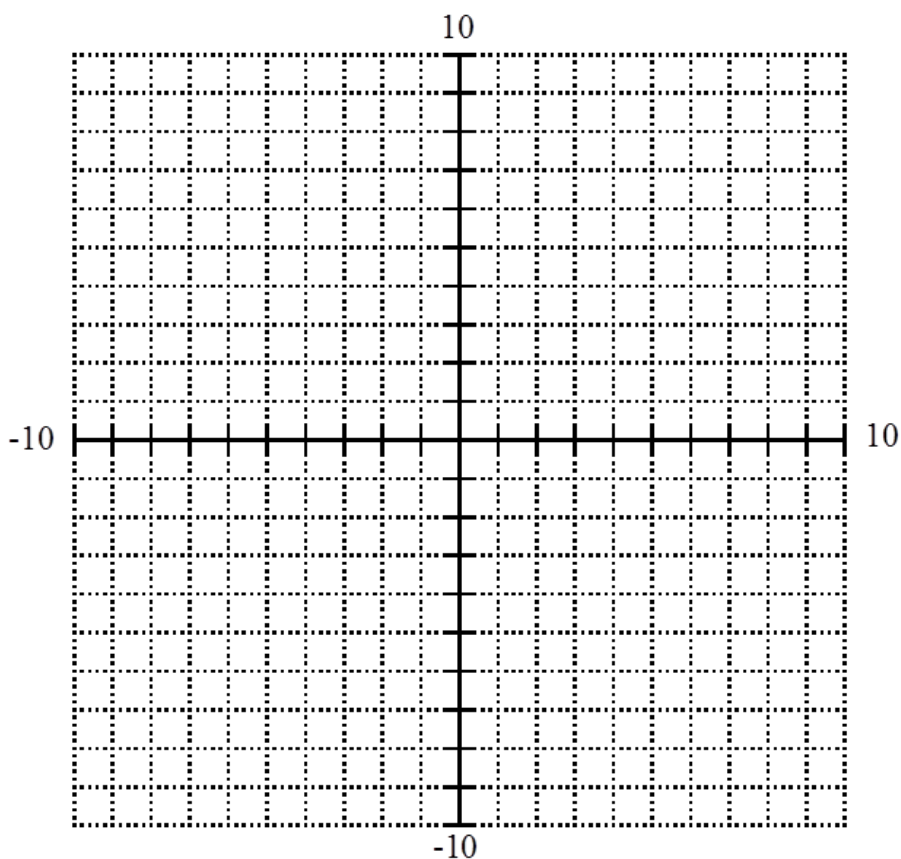
b. Find the  $x$ -intercepts

c. Find the  $y$ -intercept

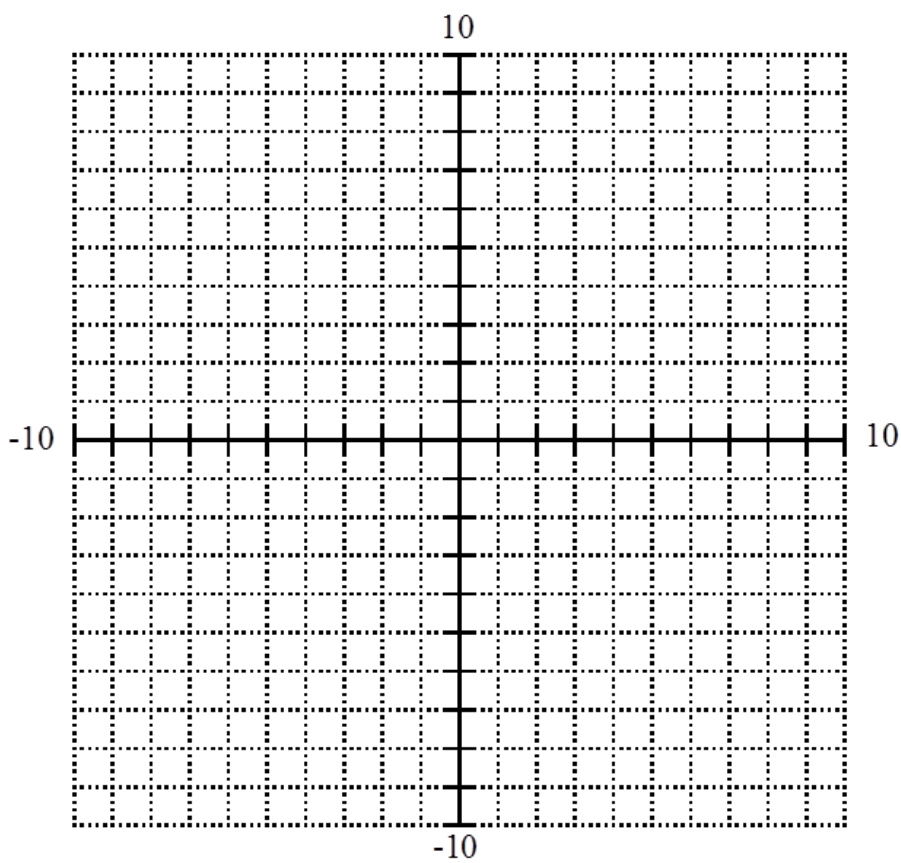
**II: INVERSE FUNCTIONS**

5. Find the inverse of each function and graph both the function and the inverse on the graphs

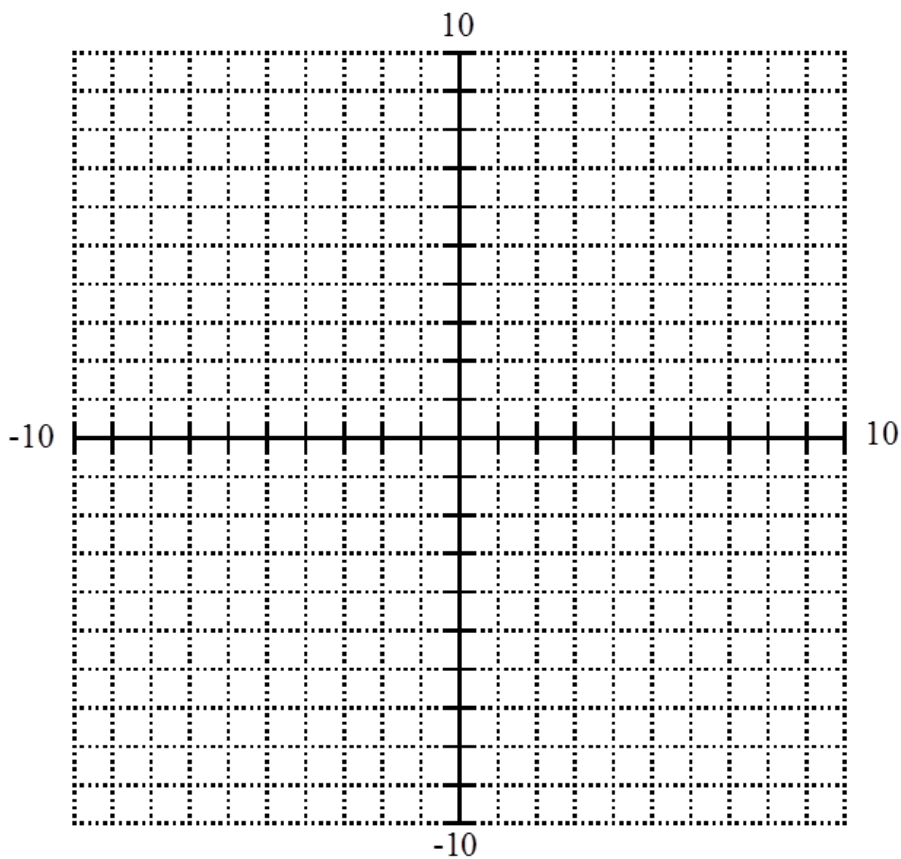
a.  $j(x) = -2x + 6$



b.  $p(x) = x^2 - 4$  for  $x \geq 0$



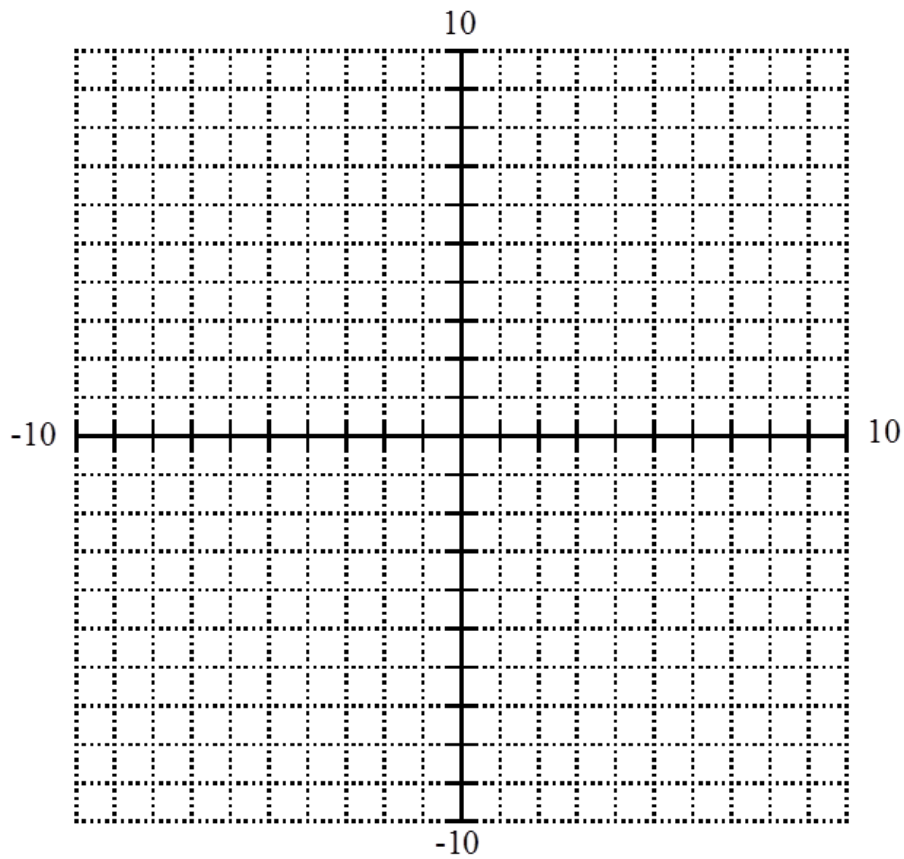
c.  $d(x) = \frac{2x+4}{x-5}$



**III: SYSTEMS OF EQUATIONS AND INEQUALITIES**

6. Graph the system

$$\begin{cases} 2y = 3x + 12 \\ 3x + y = -3 \end{cases}$$



7. Solve the system

$$\begin{cases} 3x - 4 = -2y \\ 5x + 3y - 5 = 0 \end{cases}$$

8. Solve the system

$$\begin{cases} x - y = 4 \\ x^2 - 8x + 10 = y \end{cases}$$



9. Solve the system

At the fast food restaurant, Jamie bought two tacos and a soda for \$6.50. Carl bought six tacos and two sodas for \$18.00. How much does one taco cost and how much does one soda cost?

10. Solve the system

The sum of two numbers is 37. The difference between the numbers is 11. Find the two numbers.