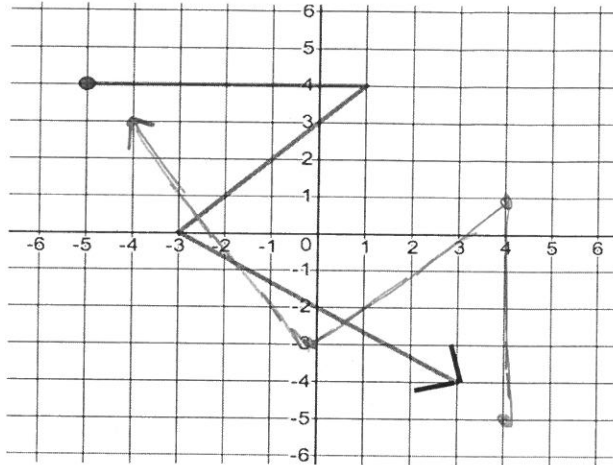


1. Is this a function? YES **NO**

a. Domain:  $[-5, \infty)$

b. Range:  $(-\infty, 4]$

c. Sketch the inverse.



2. The value of your car goes down every year. If you bought your car for \$21,199 in 2009 and it depreciates 8.7% every year, when will it be worth \$10,500? Use  $A = P(1 \pm r)^t$

7.72 yrs

Given  $f(x) = 5x + 2$

$g(x) = (x + 2)^2 - 5$

$h(x) = \frac{x-2}{5}$

3. Find  $g^{-1}(x)$

4. Find  $g(h(-18))$

5. Show that  $f(x)$  and  $h(x)$  are inverses by using compositions.

$g^{-1}(x) = \sqrt{x+5} - 2$

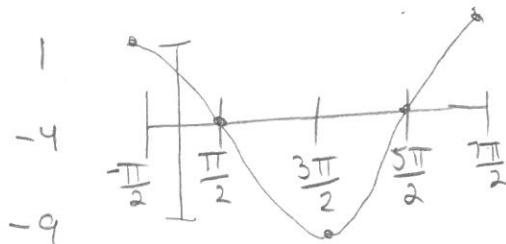
-1

= X

= X

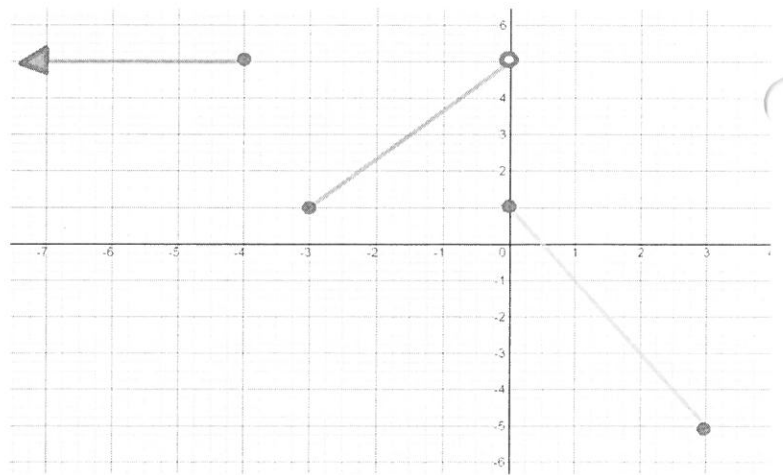
6. Graph the equation.

$y = 5 \cos \frac{1}{2} \left( x + \frac{\pi}{2} \right) - 4$

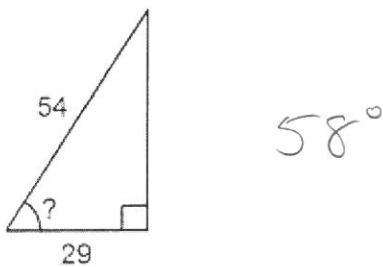


7. Given the piecewise function  $f(x)$ :

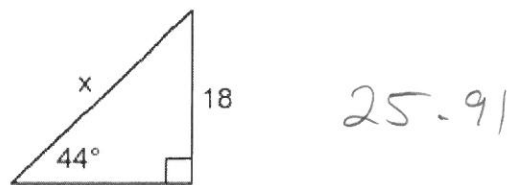
- a.  $f(0) = 1$
- b.  $f(2) = -3$
- c.  $f(4) = \text{?}$
- d.  $f(-9) = 5$



8. Find the missing angle.



9. Find the missing side.



10. Find all solutions for the equation within the interval  $0^\circ \leq \theta < 360^\circ$

a.  $\sqrt{2}\sin\theta + 1 = 0$

$225^\circ, 315^\circ$

b.  $\tan\theta\cos\theta + \cos\theta = 0$

$90^\circ, 270^\circ, 135^\circ, 315^\circ$

11. Simplify.

$\frac{\csc^2\theta - 1}{\csc^2\theta} \quad \cos^2\theta$