

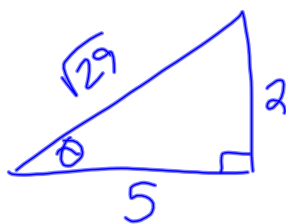
Find the value of the trig functions of θ .

a. $\tan \theta = \frac{2}{5}$

$\cot \theta = \frac{5}{2}$

$\sin \theta = \frac{2}{\sqrt{29}} \cdot \frac{\sqrt{29}}{\sqrt{29}} = \frac{2\sqrt{29}}{29}$

$\csc \theta = \frac{\sqrt{29}}{2}$



$$2^2 + 5^2 = c^2$$

$$4 + 25 = c^2$$

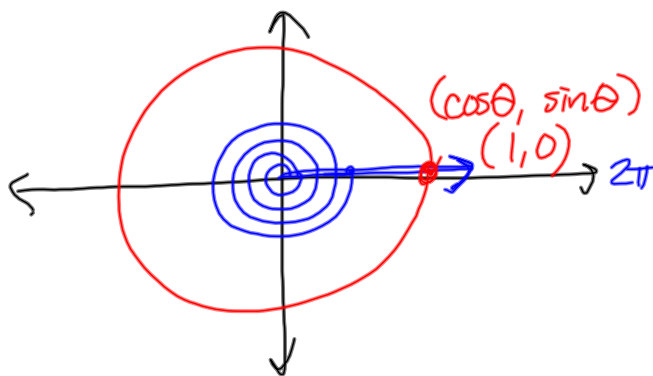
$$29 = c^2$$

$$\sqrt{29} = c$$

$\cos \theta = \frac{5}{\sqrt{29}} = \frac{5\sqrt{29}}{29}$

$\sec \theta = \frac{\sqrt{29}}{5}$

b. $\theta = 8\pi$



$\sin \theta = 0 \rightarrow \frac{0}{1}$

$\cos \theta = 1$

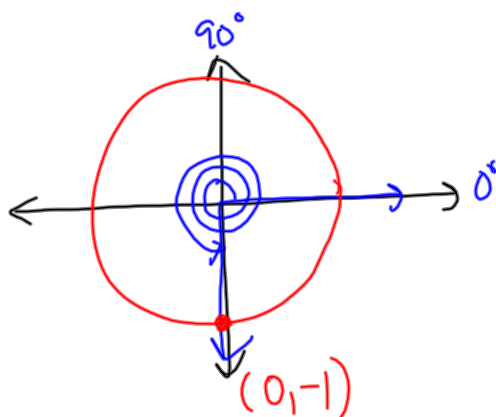
$\tan \theta = \frac{0}{1} = 0$

$\csc \theta = \frac{1}{0}$ und.

$\sec \theta = 1$

$\cot \theta = \frac{1}{0}$ und.

c. $\theta = 990^\circ \rightarrow 90^\circ \times 11$



$\sin \theta = -1$

$\cos \theta = 0$

$\tan \theta = \frac{-1}{0} = \text{undefined}$

$\csc \theta = -1$

$\sec \theta = \frac{1}{0} = \text{undefined}$

$\cot \theta = \frac{0}{-1} = 0$

Functions

function : each input has exactly one output

domain : inputs or x -coordinates

range : outputs or y -coordinates

function : $\{(3, 7), (2, 6), (5, 17)\}$ } each input
 function : $\{(3, 7), (4, 7), (5, 7)\}$ } has exactly one output

not a function: $\{(3, 7), (3, 8), (5, 9)\}$
 the input 3 has two outputs

$$D: \{3, 5\}$$

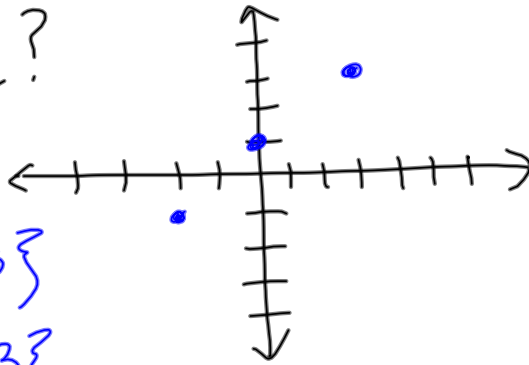
$$R: \{7, 8, 9\}$$

function?

yes

$$D: \{-2, 0, 3\}$$

$$R: \{-1, 1, 3\}$$



Vertical line test:
a vertical line drawn on the graph only hits one point at a time \rightarrow function

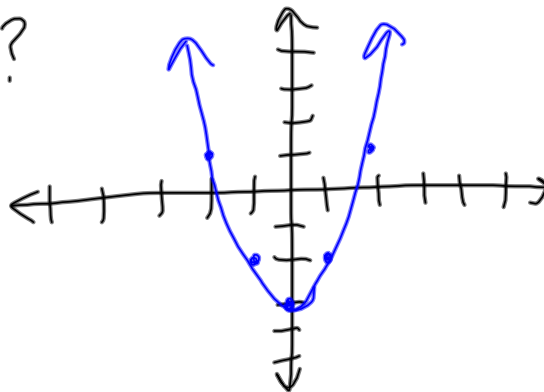
function?

yes

$$D: \text{ARN}$$

$$-\infty < x < \infty$$

$$(-\infty, \infty)$$



$$R: -3 \leq x < \infty$$

$$[-3, \infty) \text{ interval notation}$$

function:

no

