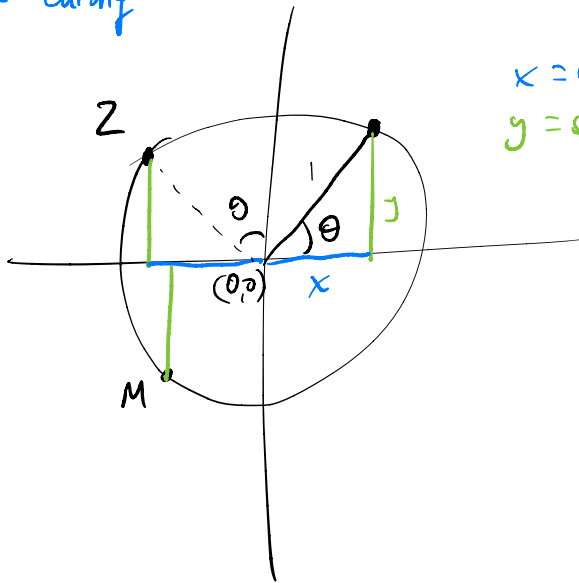


Angela &
Andrey
3-27-22

Grade 11



$$x = \cos \theta$$

$$y = \sin \theta$$

$$\cos \theta = \frac{x}{1}$$

$$\sin \theta = \frac{y}{1}$$

Let θ be in the second quadrant. What is the sign of

$$x = \cos \theta \quad -$$

$$y = \sin \theta \quad +$$

Let θ be in the second quadrant. What is the sign of

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{+}{-} = -$$

40) $H \quad \frac{b-a}{b}$

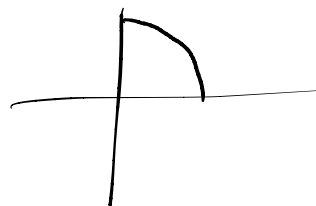
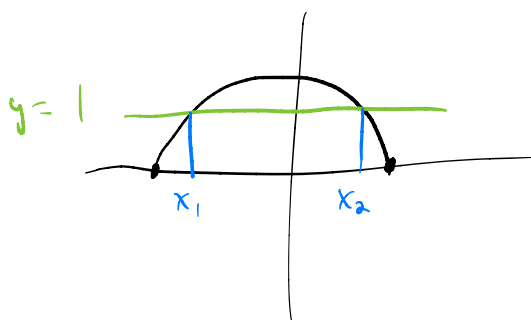
57) Vertical line test

with the graph

If any vertical line has >1 intersection, not a function

Horizontal line test

If any horizontal line has >1 intersection, not one-to-one.



Correct answer is H, passes VLT and HLT

$$59) \quad \frac{n!}{(n-2)!} = \frac{n \cdot (n-1) \cdot \cancel{(n-2) \cdot (n-3) \cdots 1}}{\cancel{(n-2) \cdot (n-3) \cdots 1}}$$

$$n(n-1) = 30$$

$$6 \cdot 5 = 30$$

$$n-1 = 5$$

$$(n-1)! = 5! = 120$$

10 P 2

"Take 10 digits 0-9. How many

n r

2 digit passwords (no replacement)

can you make?"

$$\frac{10}{1} \frac{9}{1} = 90 \text{ possibilities}$$

$$nPr = \frac{n!}{(n-r)!} = \frac{10 \cdot 9 \cdot \cancel{8 \cdots 1}}{\cancel{8 \cdots 1}}$$