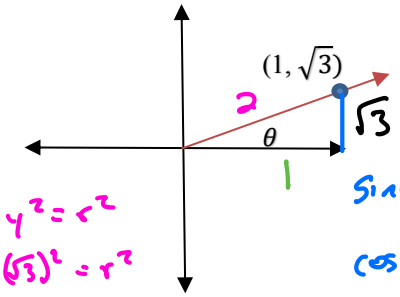
Hw 18.3 – Reference Triangles

Find $\sin\theta$, $\cos\theta$ and $\tan\theta$.

1.



$x^2+y^2=r^2$

$(1)^2+(\sqrt{3})^2=r^2$

$1+3=r^2$

$4=r^2$

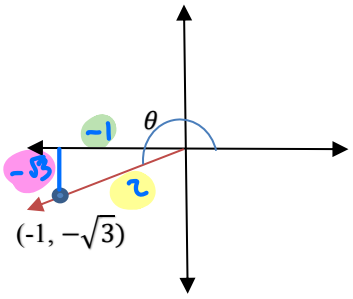
$\pm 2=r$

$\sin\theta=\frac{\sqrt{3}}{2}$

$\cos\theta=\frac{1}{2}$

$\tan\theta=\frac{\sqrt{3}}{1}=\sqrt{3}$

2.

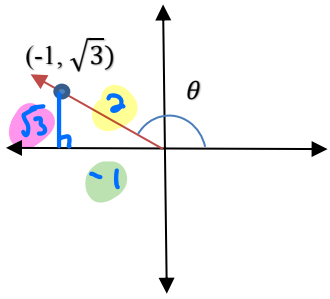


$\sin\theta=\frac{-\sqrt{3}}{2}$

$\cos\theta=\frac{-1}{2}$

$\tan\theta=\frac{-\sqrt{3}}{-1}=\sqrt{3}$

3.

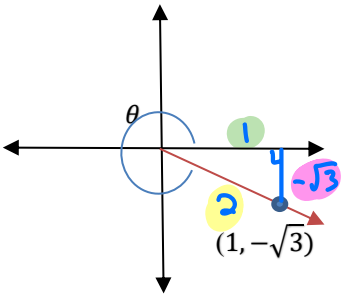


$\sin\theta=\frac{\sqrt{3}}{2}$

$\cos\theta=\frac{-1}{2}$

$\tan\theta=\frac{\sqrt{3}}{-1}=-\sqrt{3}$

4.

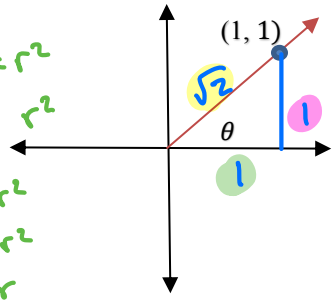


$\sin\theta=\frac{-\sqrt{3}}{2}$

$\cos\theta=\frac{1}{2}$

$\tan\theta=\frac{-\sqrt{3}}{1}=-\sqrt{3}$

5.



$x^2+y^2=r^2$

$1^2+1^2=r^2$

$1+1=r^2$

$2=r^2$

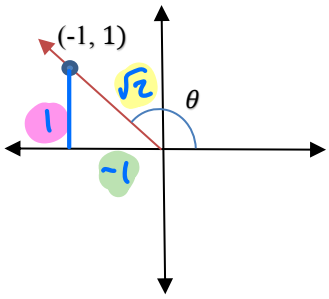
$\pm\sqrt{2}=r$

$\sin\theta=\frac{1}{\sqrt{2}}$

$\cos\theta=\frac{1}{\sqrt{2}}$

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

6.

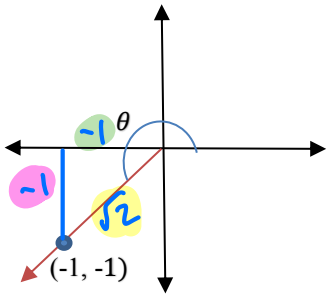


$\sin\theta=\frac{1}{\sqrt{2}}$

$\cos\theta=\frac{-1}{\sqrt{2}}$

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

7.

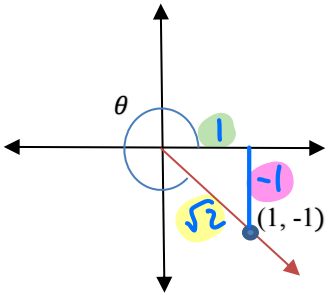


$\sin\theta=\frac{-1}{\sqrt{2}}$

$\cos\theta=\frac{-1}{\sqrt{2}}$

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

8.



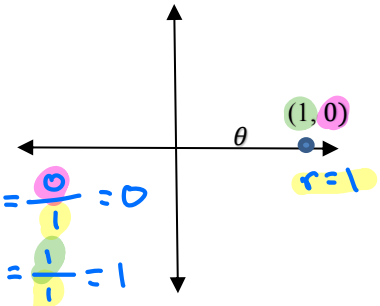
$\sin\theta=\frac{-1}{\sqrt{2}}$

$\cos\theta=\frac{1}{\sqrt{2}}$

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

Find $\sin\theta$, $\cos\theta$ and $\tan\theta$.

9.

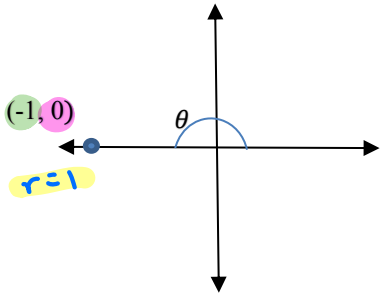


$\sin\theta = \frac{0}{1} = 0$

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

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

10.

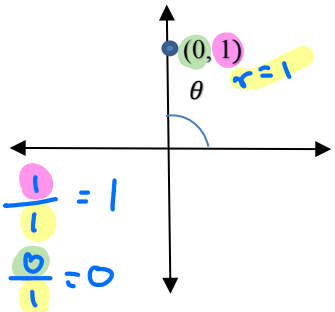


$\sin\theta = \frac{0}{1} = 0$

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

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

11.

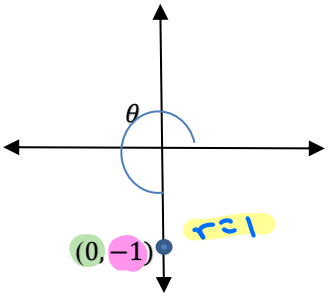


$\sin\theta = \frac{1}{1} = 1$

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

$\tan\theta = \frac{1}{0}$ (undefined)

12.

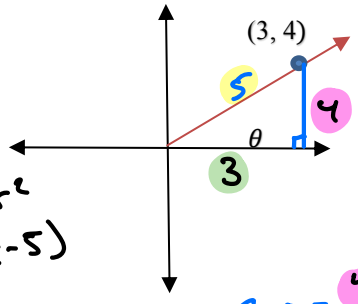


$\sin\theta = \frac{-1}{1} = -1$

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

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

13.



$x^2 + y^2 = r^2$

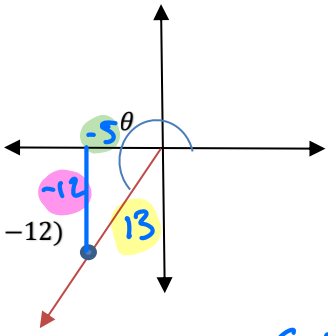
PT (3-4-5)

$\sin\theta = \frac{4}{5}$

$\cos\theta = \frac{3}{5}$

$\tan\theta = \frac{4}{3}$

14.



$x^2 + y^2 = r^2$

PT 5-12-13

$\sin\theta = \frac{-12}{13}$

$\cos\theta = \frac{-5}{13}$

$\tan\theta = \frac{-12}{-5} = \frac{12}{5}$