

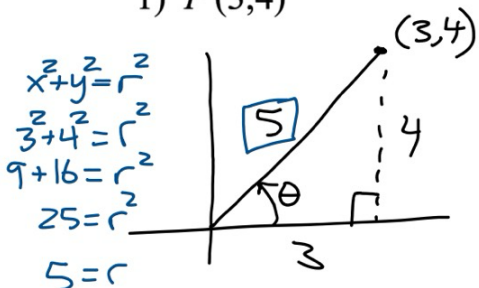
12-2 WS - Key

Wednesday, February 5, 2025

7:46 AM

Find the values of the six trigonometric functions of an angle θ in standard position whose terminal side passes through point P .

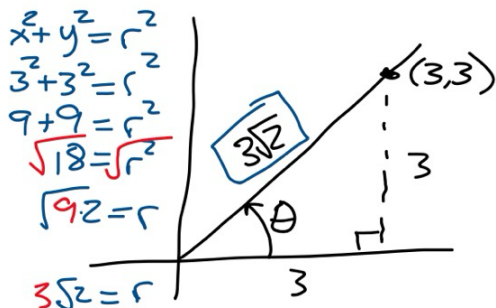
1) $P(3,4)$



$\sin(\theta) =$	$\frac{4}{5}$	$\csc(\theta) =$	$\frac{5}{4}$
$\cos(\theta) =$	$\frac{3}{5}$	$\sec(\theta) =$	$\frac{5}{3}$
$\tan(\theta) =$	$\frac{4}{3}$	$\cot(\theta) =$	$\frac{3}{4}$

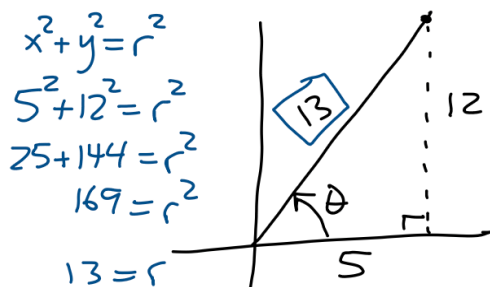
Find the values of the six trigonometric functions of an angle θ in standard position whose terminal side passes through point P .

2) $P(3,3)$



$\sin(\theta) =$	$\frac{3}{3\sqrt{2}} = \frac{1}{\sqrt{2}}$	$\csc(\theta) =$	$\frac{\sqrt{2}}{1} = \sqrt{2}$
$\cos(\theta) =$	$\frac{3}{3\sqrt{2}} = \frac{1}{\sqrt{2}}$	$\sec(\theta) =$	$\frac{\sqrt{2}}{1} = \sqrt{2}$
$\tan(\theta) =$	$\frac{3}{3} = 1$	$\cot(\theta) =$	$\frac{3}{3} = 1$

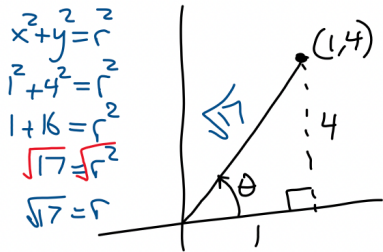
3) Given an angle θ in standard position whose terminal side passes through $P(12,5)$, find:



$$\cot(\theta) = \frac{5}{12}$$

$$\sec(\theta) = \frac{13}{5}$$

4) Given an angle θ in standard position whose terminal side passes through $P(1,4)$, find:



$$\cos(\theta) = \frac{1}{\sqrt{17}}$$

$$\csc(\theta) = \frac{\sqrt{17}}{4}$$

Use the cofunction identities to find the measure of the acute angle ϕ .

5. $\sin \phi = \cos 12^\circ$

6. $\cos \phi = \sin 65^\circ$

7. $\tan \phi = \cot 45^\circ$

8. $\csc \phi = \sec 73^\circ$

$$\phi = 78^\circ$$

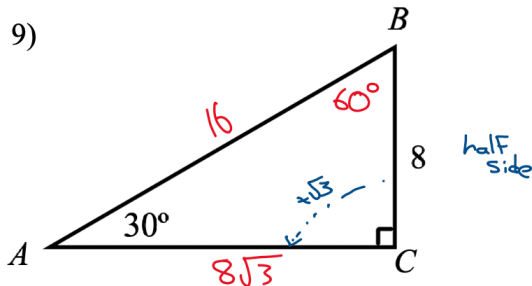
$$\phi = 25^\circ$$

$$\phi = 45^\circ$$

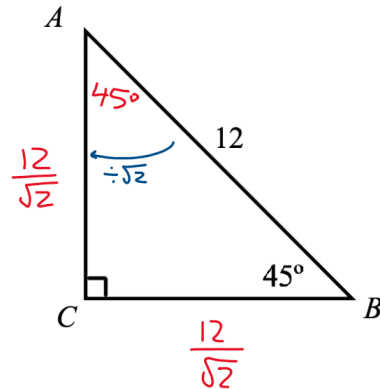
$$\phi = 17^\circ$$

For each triangle, fill in all the missing information possible. If you cannot, label it as "can't find". Triangles are not necessarily drawn to scale.

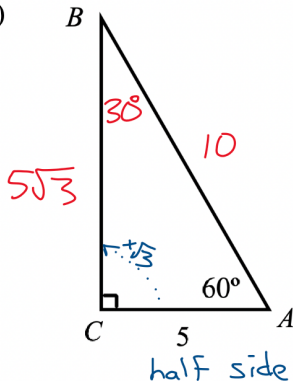
9)



10)



11)



12)

