WR Key

Answers: 1. $\sin 140^o$ 2. $\cos 58^o$ 3. $\tan 80^o$ 4. $-\sin\left(\frac{7\pi}{15}\right)$

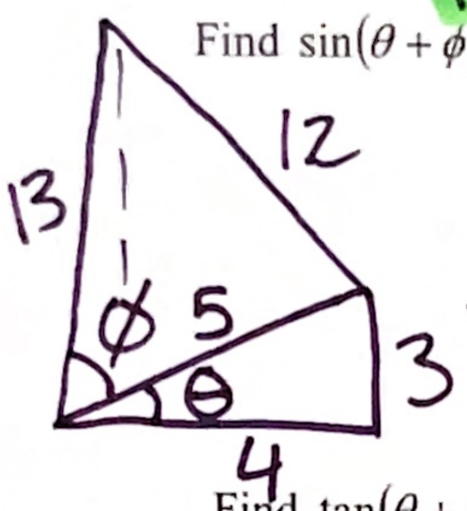
5. $\cos\left(\frac{13\pi}{42}\right)$ 6. $\tan\frac{7\pi}{12}$ 7. $2+\sqrt{3}$ 8. $\frac{\sqrt{2}-\sqrt{6}}{4}$ 9. $-\frac{16}{65}$

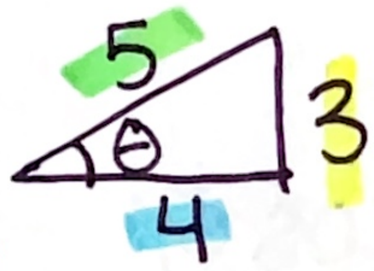
10. $-\frac{33}{65}$ 11. $\frac{16}{63}$ 12. $\frac{-4+3\sqrt{3}}{10}$ 13. $\frac{24}{7}$

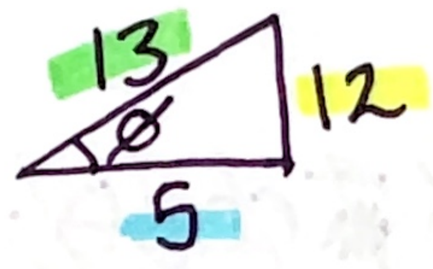
SOH CAH TOA

S | A
T | C

Find $\sin(\theta+\phi)$ if $\sin\theta=\frac{3}{5}$, $\sin\phi=\frac{12}{13}$ and both θ and ϕ are quadrant I angles.







$\sin\theta\cos\phi+\sin\phi\cdot\cos\theta$

$\frac{3}{5}\cdot\frac{4}{5}+\frac{12}{13}\cdot\frac{5}{13}=\frac{12}{25}+\frac{60}{169}$

$\frac{3,528}{4,225}$

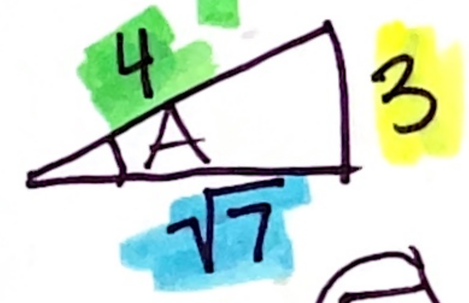
Find $\tan(\theta\pm\phi)$ if $\tan\theta=\frac{1}{3}$ and $\tan\phi=\frac{2}{3}$.

$\frac{\frac{1}{3}+\frac{2}{3}}{1-\frac{1}{3}\cdot\frac{2}{3}}$ $\quad\frac{1}{1-\frac{2}{9}}$ $\quad\frac{\tan\theta+\tan\phi}{1-\tan\theta\cdot\tan\phi}$

$\frac{1}{7/9}$ → $\frac{9}{7}$

One of the primary trigonometric ratios for an angle is given, as well as the quadrant in which each angle is located. Find the other two trigonometric ratios of the angle.

a) $\sin A=\frac{3}{4}$, first quadrant ALL



$4^2=3^2+s^2$

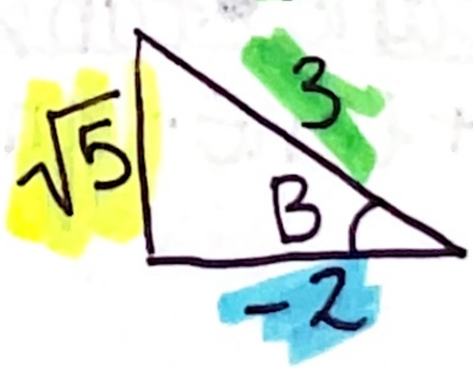
$16-9=s^2$

$\sqrt{7}=\sqrt{s^2}$

$\cos(A)=\frac{\sqrt{7}}{4}$

$\tan(A)=\frac{3}{\sqrt{7}}\cdot\frac{\sqrt{7}}{\sqrt{7}}$ $\quad\frac{3\sqrt{7}}{7}$

b) $\cos B=\frac{2}{3}$, second quadrant sin



$3^2=(-2)^2+s^2$

$9-4=s^2$

$\sqrt{5}=s$

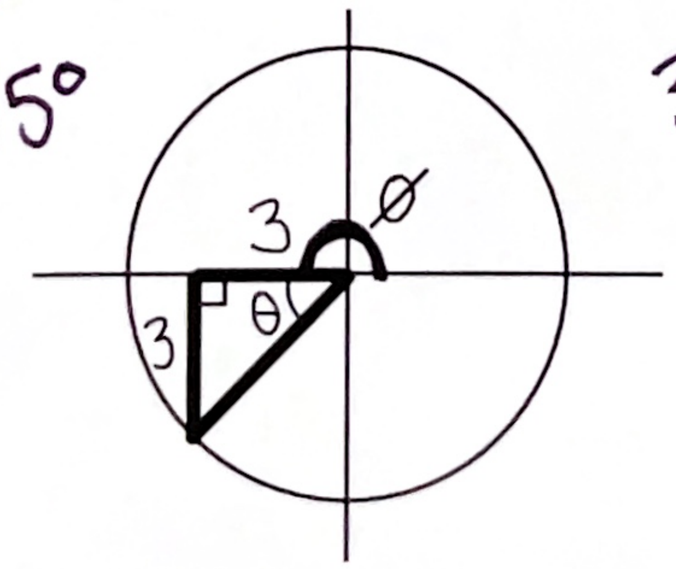
$\sin(B)=\frac{\sqrt{5}}{3}$

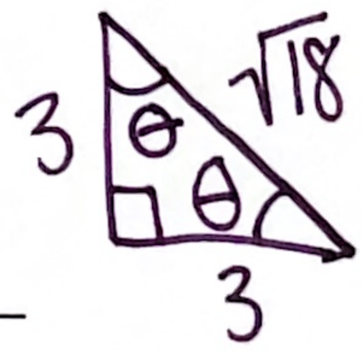
$\tan(B)=\frac{\sqrt{5}}{-2}$

Solve the following triangle:

$\emptyset=180°$

$\theta=45°$





$3^2+3^2=h^2$

$9+9=h^2$

$\sqrt{18}=h$

$\sqrt{3\cdot3\cdot2}$

$3\sqrt{2}$