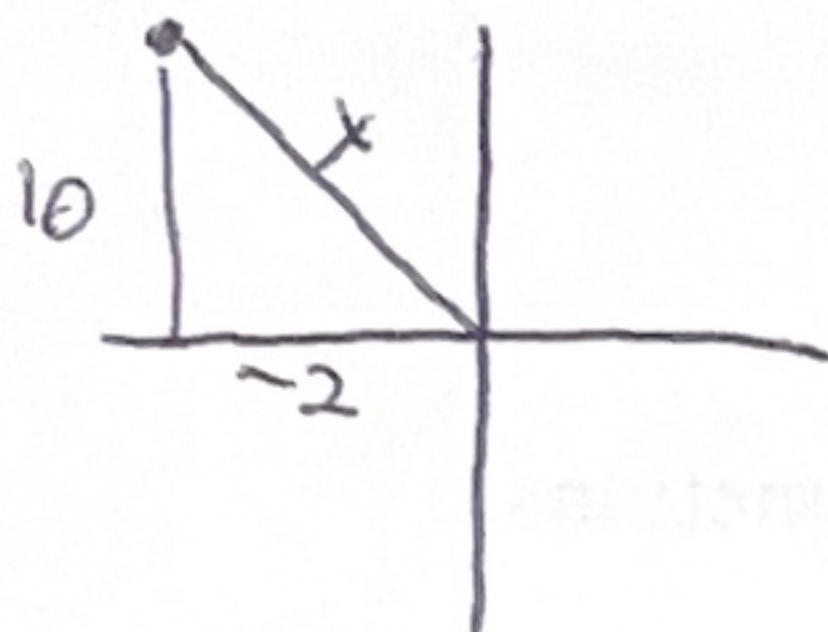


Key

Trigonometric Functions

1. Find the value of $\sec \theta$ and $\sin \theta$ given the point on the terminal side $(-2, 10)$

$$a^2 + b^2 = c^2 \rightarrow (-2)^2 + (10)^2 = \sqrt{104}$$



$$\sin = \frac{5 \cdot 10}{2 \sqrt{26}} \cdot \frac{\sqrt{26}}{\sqrt{26}} = \frac{5 \sqrt{26}}{26}$$

$$\sec = \frac{2 \sqrt{26}}{-2} = -\sqrt{26}$$

$$= 2 \sqrt{26}$$

104
 2 52
 Pair 2 26
 2 13

2. Find the 6 trigonometric values for the angle 270° .

$\sin = \text{Negative}$

$\cos = \text{Negative}$

$\tan = \text{Positive}$

$\csc = \text{Negative}$

$\sec = \text{Negative}$

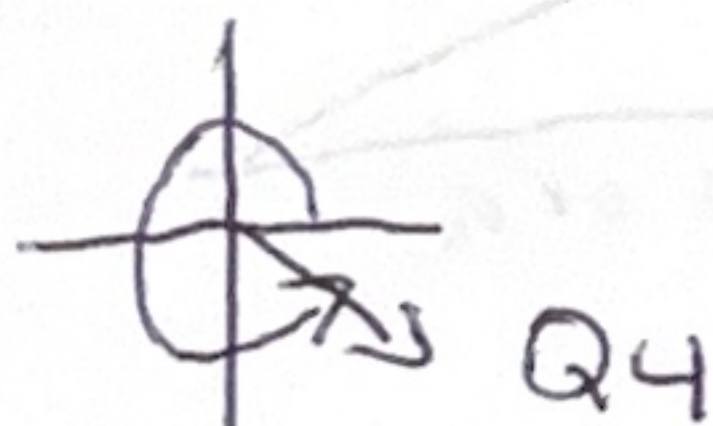
$\cot = \text{Positive}$



3. $\tan 330^\circ$

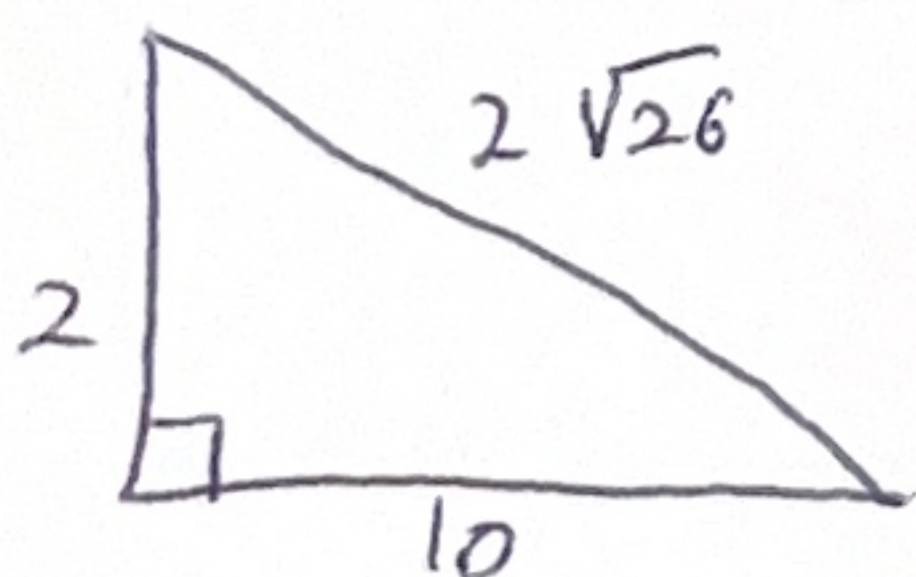
only $\cos$ & $\sec$ are positive

$\tan 330^\circ = \text{Negative}$



4. Given $\tan \theta = \frac{2}{10}$, find $\cos \theta$. Q I

Pythagorean theorem: $\sqrt{10^2 + 2^2} = \sqrt{104} = 2\sqrt{26}$



$$\cos = \frac{x}{r} = \frac{5 \cdot 10}{2 \sqrt{26}} \cdot \frac{\sqrt{26}}{\sqrt{26}} = \frac{5 \sqrt{26}}{26}$$

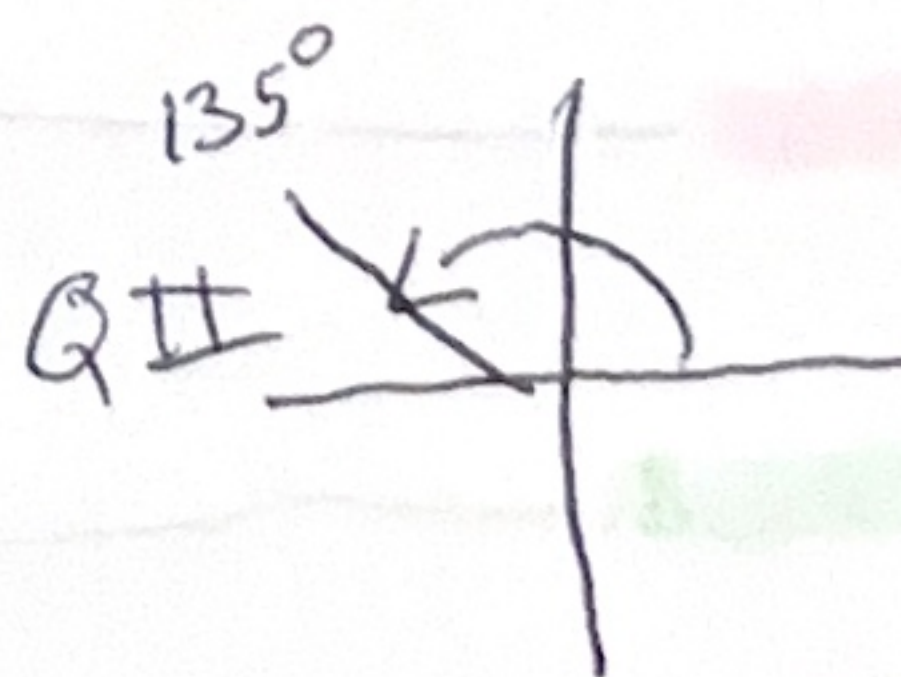
$\cos = \text{Positive}$

5. Find the 6 trigonometric values for the angle 135° .

$\sin = \text{Positive}$ $\csc = \text{Positive}$

$\cos = \text{Negative}$ $\sec = \text{Negative}$

$\tan = \text{Negative}$ $\cot = \text{Negative}$

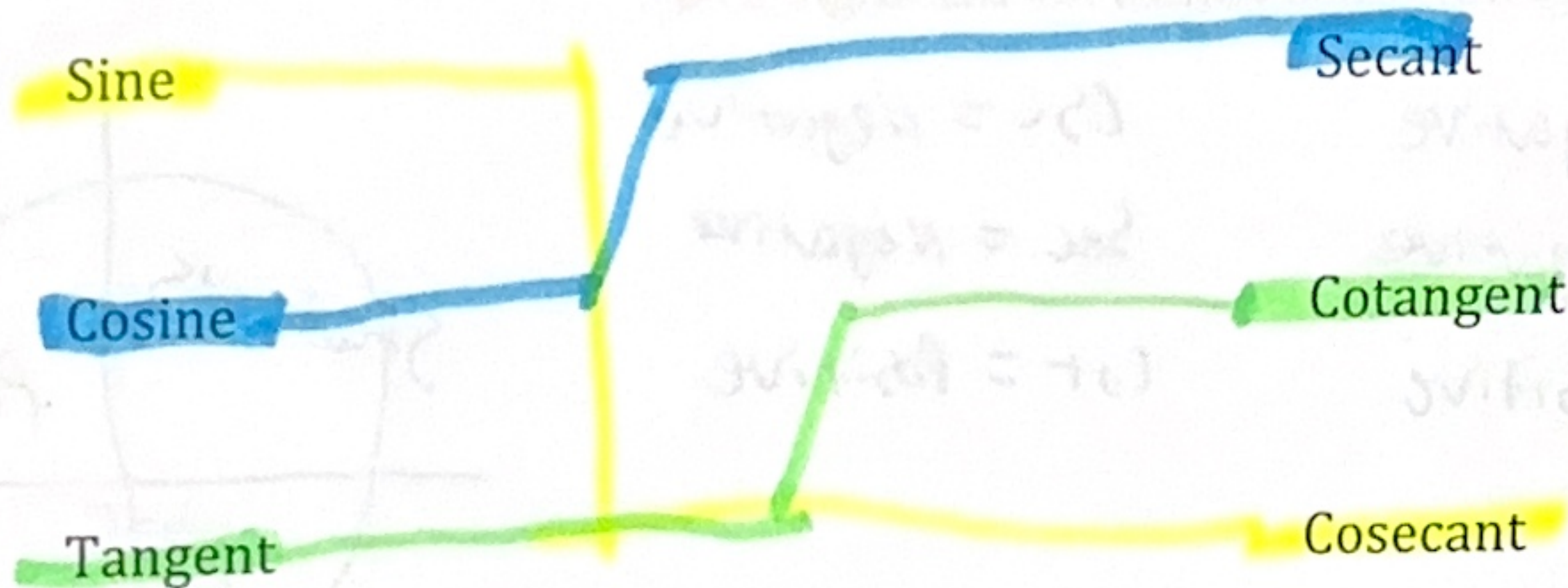


6. Given $\sec 63^\circ = \frac{3}{7}$, find $\csc 27^\circ$.

$63^\circ + 27^\circ = 90^\circ \rightarrow$ Cofunctions!! , meaning answers will be equal

$$\csc(27^\circ) = \frac{3}{7}$$

7. Match the six trigonometric functions with their reciprocal functions.

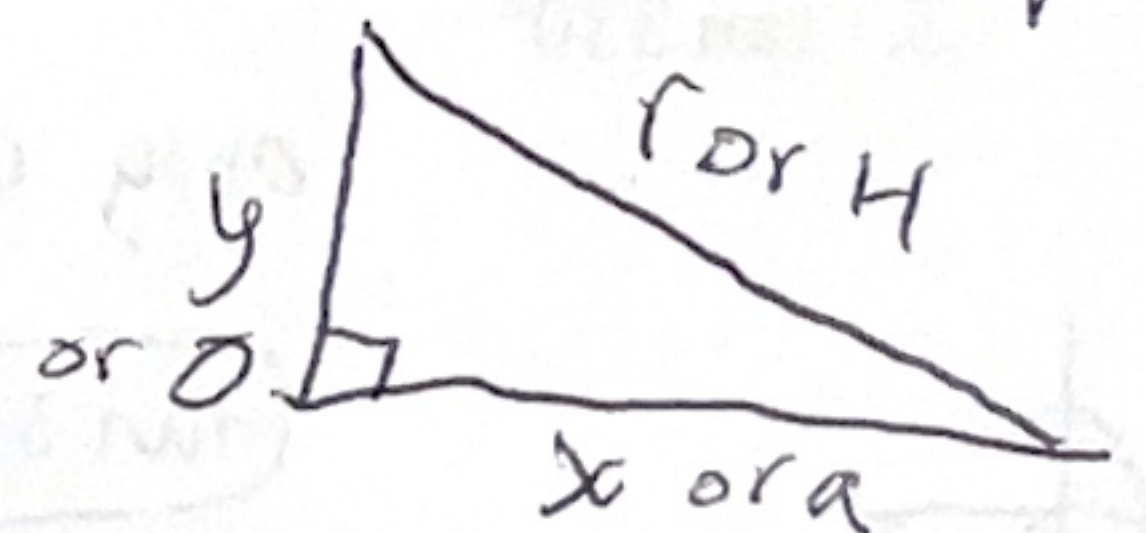


SOHCAHTO

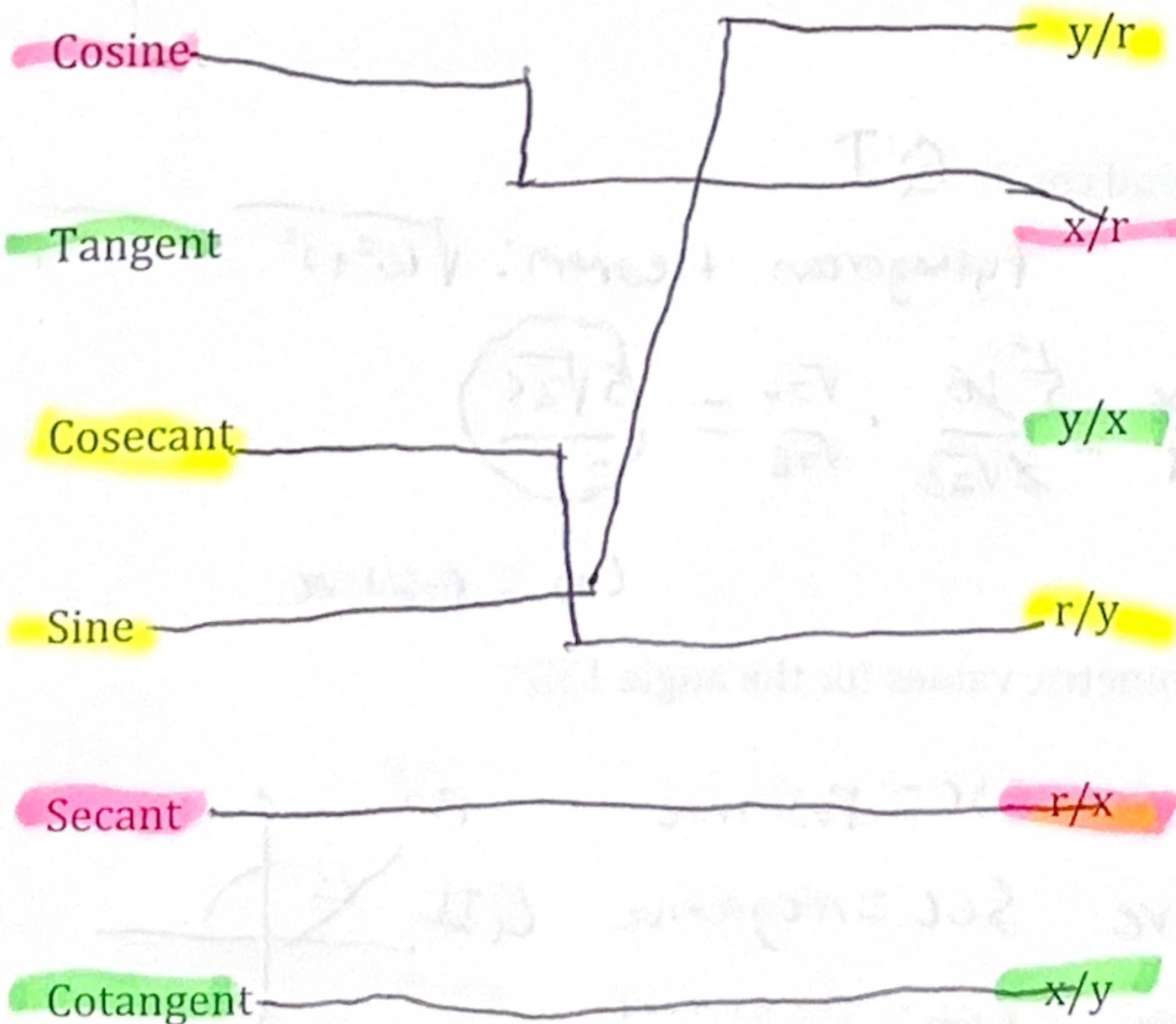
$$\sin = \frac{O}{H} \text{ or } \frac{y}{r}$$

$$\cos = \frac{A}{H} \text{ or } \frac{x}{r}$$

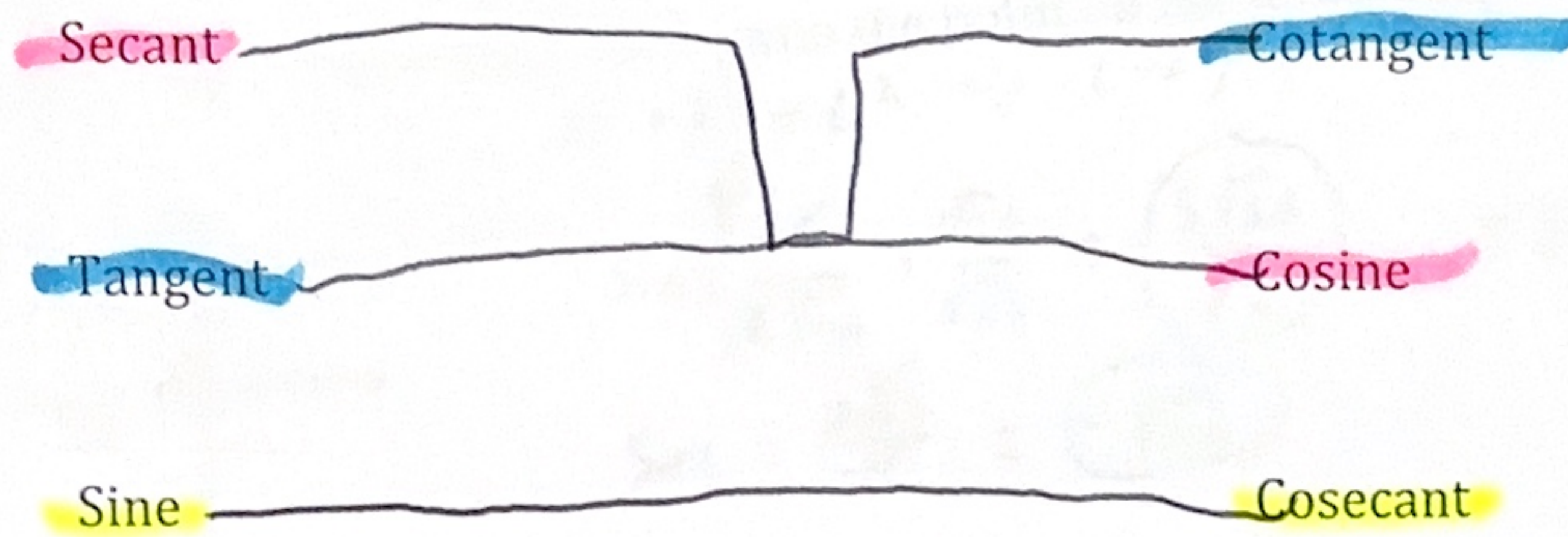
$$\tan = \frac{O}{A} \text{ or } \frac{y}{x}$$



8. Match the six trigonometric functions with their ratios.



9. Match the six trigonometric functions with their cofunctions.



10. Match the signs of the trigonometric functions in Quadrant 3. *only Tan & Cot are Positive*

