



Math worksheet on 'Trigonometry - Ratio Manipulation (Level 2)'. Part of a broader unit on 'Trigonometry Fundamentals - Intro'

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**1** Solve the fraction for 'x' in terms of the variables and reduce.

$$\sin = \frac{x}{hyp}$$

**a**  
 $x = \sin \cdot hyp$

**b**  
 $x = \frac{\sin}{hyp}$

**c**  
 $x = \frac{hyp}{\sin}$

**2** Solve the fraction for 'x' in terms of the variables and reduce.

$$\cos = \frac{x}{hyp}$$

**a**  
 $x = \cos \cdot hyp$

**b**  
 $x = \frac{\cos}{hyp}$

**c**  
 $x = \frac{hyp}{\cos}$

**3**

$$\sin = \frac{opp}{x}$$

Solve the fraction for 'x' in terms of the variables and reduce.

**a**  
 $x = \frac{opp}{\sin}$

**b**  
 $x = \frac{\sin}{opp}$

**4** Solve the fraction for 'x' in terms of the variables and reduce.

$$\tan = \frac{opp}{x}$$

**a**  
 $x = \frac{\tan}{opp}$

**b**  
 $x = \frac{opp}{\tan}$

**c**  
 $x = \tan \cdot opp$

**5** Solve the fraction for 'x' in terms of the variables and reduce.

$$\cos = \frac{adj}{x}$$

**a**  
 $x = \frac{adj}{\cos}$

**b**  
 $x = \cos \cdot adj$

**c**  
 $x = \frac{\cos}{adj}$

**6** Solve the fraction for 'x' in terms of the variables and reduce.

$$\tan = \frac{x}{adj}$$

**a**  
 $x = \frac{adj}{\tan}$

**b**  
 $x = \frac{\tan}{adj}$

**c**  
 $x = \tan \cdot adj$