

Trig Ratios - Missing Sides Practice A

Find the missing side of each right triangle.
Then find each trig ratio as a fraction.

$$1. \sin M = \frac{\text{opp}}{\text{hyp}} = \frac{16}{34} = \frac{8}{17}$$

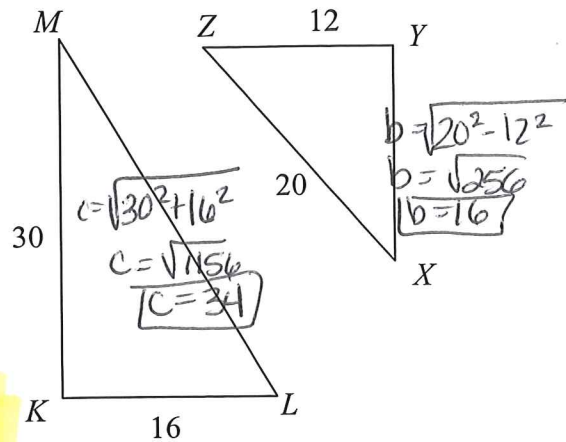
$$2. \cos Z = \frac{\text{adj}}{\text{hyp}} = \frac{12}{20} = \frac{3}{5}$$

$$3. \tan L = \frac{\text{opp}}{\text{adj}} = \frac{30}{16} = \frac{15}{8}$$

$$4. \sin X = \frac{\text{opp}}{\text{hyp}} = \frac{12}{20} = \frac{3}{5}$$

$$5. \cos L = \frac{\text{adj}}{\text{hyp}} = \frac{16}{34} = \frac{8}{17}$$

$$6. \tan Z = \frac{\text{opp}}{\text{adj}} = \frac{16}{12} = \frac{4}{3}$$



Find the missing side(s) of each right triangle. Round to the nearest tenth.

7. $\sin \theta = \frac{\text{opp}}{\text{hyp}}$
 $\sin 36^\circ = \frac{x}{8}$
 $x = 8 \sin 36^\circ$
 $x \approx 4.702$

8. $\tan \theta = \frac{\text{opp}}{\text{adj}}$
 $\tan 50^\circ = \frac{5}{y}$
 $y = \frac{5}{\tan 50^\circ} \approx 4.195$

9. $\sin 34^\circ = \frac{x}{y}$
 $\cos 34^\circ = \frac{10}{y} \Rightarrow y \approx 12.062$
 $\tan 34^\circ = \frac{x}{10}$
 $x \approx 6.745$

10. $\sin 70^\circ = \frac{x}{7.2}$
 $x \approx 6.766$
 $\tan 70^\circ = \frac{x}{y}$
 $y \approx 2.463$

11. $\sin 23^\circ = \frac{16}{y}$
 $y \approx 40.949$
 $\cos 23^\circ = \frac{x}{y}$
 $\cos 23^\circ = \frac{x}{40.949}$
 $x \approx 37.694$

12. Special Right Triangle (find EXACTLY)

$\sin 60^\circ = \frac{y}{18}$
 $y \approx 15.588$
 $\cos 60^\circ = \frac{x}{18}$
 $\cos 60^\circ = \frac{x}{18}$
 $x \approx 9$