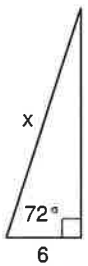


Solving Right Triangles

Find the missing side. Round to the nearest tenth.

1)



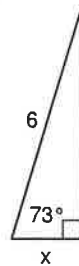
$$\cos 72 = \frac{6}{x}$$

$$0.3090 = \frac{6}{x}$$

$$x = 19.4$$

19.4

2)



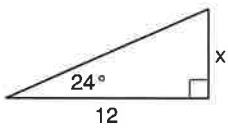
$$\cos 73 = \frac{x}{6}$$

$$0.2924 = \frac{x}{6}$$

$$x = 1.8$$

1.8

3)



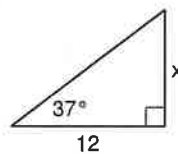
$$\tan 24 = \frac{x}{12}$$

$$0.4452 = \frac{x}{12}$$

$$x = 5.3$$

5.3

4)



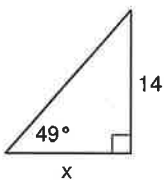
$$\tan 37 = \frac{x}{12}$$

$$0.7536 = \frac{x}{12}$$

$$x = 9.0$$

9.0

5)



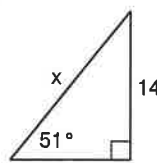
$$\tan 49 = \frac{14}{x}$$

$$1.1504 = \frac{14}{x}$$

$$x = 12.2$$

12.2

6)



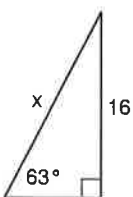
$$\sin 51 = \frac{14}{x}$$

$$0.7771 = \frac{14}{x}$$

$$x = 18.0$$

18.0

7)



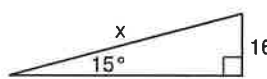
$$\sin 63 = \frac{16}{x}$$

$$0.8910 = \frac{16}{x}$$

$$x = 18.0$$

18.0

8)



$$\sin 15 = \frac{16}{x}$$

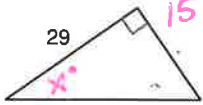
$$0.2588 = \frac{16}{x}$$

$$x = 61.8$$

61.8

Find the missing angle. Round to the nearest whole number.

9)



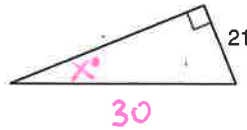
$$\tan X = \frac{O}{A}$$

$$\tan X = \frac{15}{29}$$

$$\tan X = 0.5172$$

$$X \approx 27^\circ$$

10)



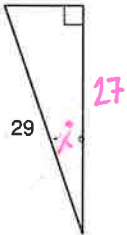
$$\sin X = \frac{O}{H}$$

$$\sin X = \frac{21}{30}$$

$$\sin X = 0.7$$

$$X \approx 44^\circ$$

11)



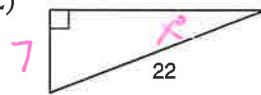
$$\cos X = \frac{A}{H}$$

$$\cos X = \frac{27}{29}$$

$$\cos X = 0.9310$$

$$X \approx 21^\circ$$

12)



$$\sin X = \frac{O}{H} = \frac{7}{22}$$

$$\sin X = 0.3182$$

$$X \approx 19^\circ$$

13)

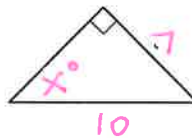


$$\tan X = \frac{O}{A} = \frac{5}{12}$$

$$\tan X = 0.4167$$

$$X \approx 25^\circ$$

14)

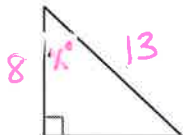


$$\sin X = \frac{O}{H} = \frac{7}{10}$$

$$\sin X = 0.7$$

$$X \approx 44^\circ$$

15)

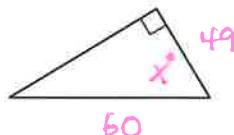


$$\cos X = \frac{A}{H} = \frac{8}{13}$$

$$\cos X = 0.6154$$

$$X \approx 52^\circ$$

16)



$$\cos X = \frac{A}{H} = \frac{49}{60}$$

$$\cos X = 0.8167$$

$$X \approx 35^\circ$$

Critical thinking question:

- 17) Write a new problem that is similar to the others on this worksheet. Solve the question you wrote.

Many answers.