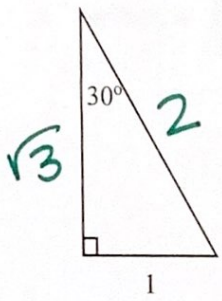
Homework – The Trig Connection

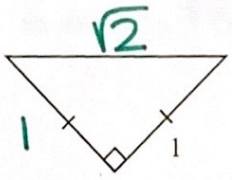
Name: *KEY*

Fill in the side lengths of each of the special right triangles.

1.

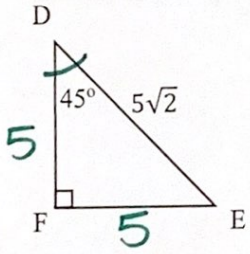


2.



Find the indicated values using the triangle provided. Simplify your answers.

3.

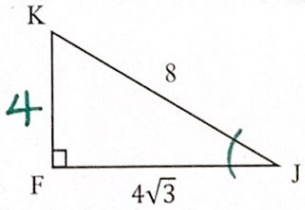


$DF =$ 5

$FE =$ 5

$\tan(D) =$ 1

4.

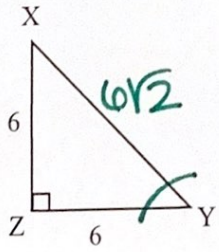


$m\angle J =$ 30°

$KF =$ 4

$\sin(J) =$ 1/2

5.

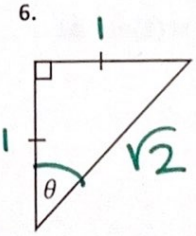


$m\angle X =$ 45°

$\sin(Y) =$ √2/2

$\cos(Y) =$ √2/2

6.

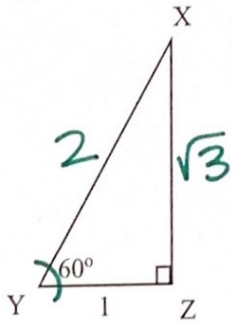


$\theta =$ 45°

$\cos(\theta) =$ √2/2

$\tan(\theta) =$ √2/2

7.

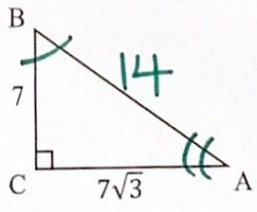


$XY =$ 2

$\cos(Y) =$ 1/2

$\tan(Y) =$ √3

8.

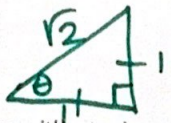


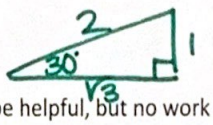
$m\angle B =$ 60°

$\sin(B) =$ √3/2

$\tan(A) =$ √3/3

Rapid Practice





Find the indicated values *without* using a calculator. A picture may be helpful, but no work is required.
Hint Refer to the chart in the notes

9. $sin(30°) =$ 1/2

10. $cos(30°) =$ $\sqrt{3}/2$

11. $tan(60°) =$ $\sqrt{3}$

12. $sin(45°) =$ $\sqrt{2}/2$

13. $tan(\theta) = 1$ $\theta = ?$ 45°

14. $tan(\theta) = \frac{\sqrt{3}}{3}$ $\theta = ?$ 30°

15. $cos(\theta) = \frac{\sqrt{2}}{2}$ $\theta = ?$ 45°

16. $sin(\theta) = \frac{\sqrt{3}}{2}$ $\theta = ?$ 60°