

1. Draw a  $45 - 45 - 90$  triangle showing all its sides.

Use the diagram above, to determine the exact values of the following ratios.

2.  $\cos 45^\circ$

3.  $\sin 45^\circ$

4.  $\tan 45^\circ$

5.  $(\sin 45^\circ)^2$

6.  $(\cos 45^\circ)^2$

7.  $\tan 45^\circ \cos 45^\circ$

8.  $\cot 45^\circ$

9.  $\csc 45^\circ$

10.  $\sec 45^\circ$

11.  $\csc 45^\circ \tan 45^\circ$

12.  $\sec 45^\circ \sin 45^\circ$

13.  $(\cot 45^\circ)^2$

14.  $\cot 45^\circ \sin 45^\circ \cos 45^\circ$

15.  $\sin 45^\circ \tan 45^\circ$

16.  $\csc 45^\circ \sec 45^\circ$

17.  $\tan 45^\circ \cot 45^\circ$

18.  $(\cos 45^\circ)^2 + (\sec 45^\circ)^2$

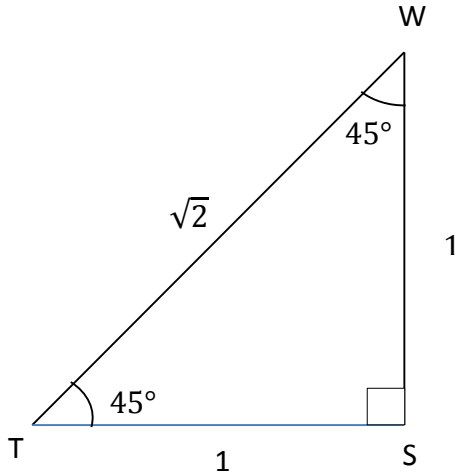
19.  $\cos 45^\circ \cos 45^\circ - \tan 45^\circ$

20.  $\sin 45^\circ (\csc 45^\circ)^2$

## Answer keys

### Day 98:

1.



2.  $\frac{1}{\sqrt{2}}$

3.  $\frac{1}{\sqrt{2}}$

4. 1

5.  $\frac{1}{2}$

6.  $\frac{1}{2}$

7.  $\frac{1}{\sqrt{2}}$

8. 1

9.  $\sqrt{2}$

10.  $\sqrt{2}$

11.  $\sqrt{2}$

12. 1

13. 1

14.  $\frac{1}{2}$

15.  $\frac{1}{\sqrt{2}}$

16. 2

17. 1

18. 1

19.  $-\frac{1}{2}$

20.  $\sqrt{2}$