

Geometry - Right Triangle Trigonometry - Test

Common Core G-SRT.C.6, G-SRT.C.7, G-SRT.C.8 · maths-pdf.fr/en/

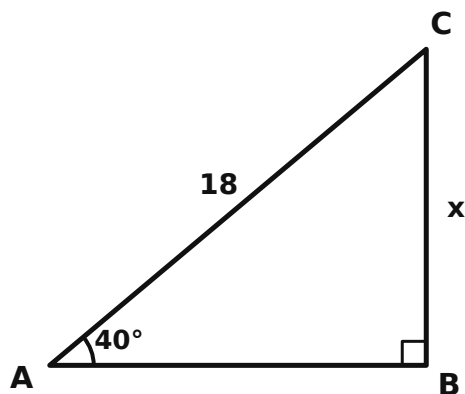
Name: _____ Class: _____ Date: ____/____/____

This 45-minute test checks right triangle trigonometry and its applications. It has 9 questions worth 20 points in total. Show every step of the work, label diagrams, and include units where they apply. Calculators are allowed unless the teacher says otherwise.

About this test

- Grade: Geometry
- Chapter: Right Triangle Trigonometry
- Standards: G-SRT.C.6, G-SRT.C.7, G-SRT.C.8
- Time: 45 minutes
- Total: 20 points

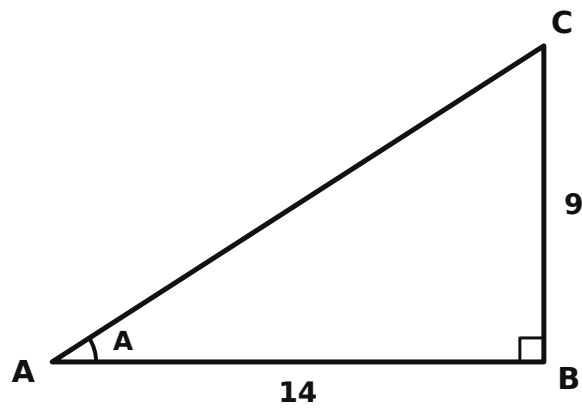
Question 1 - Find a side [2 pts]



Right triangle.

Find x to the nearest tenth.

Question 2 - Find an angle [2 pts]



Legs 9 and 14.

Find the measure of angle A to the nearest tenth of a degree.

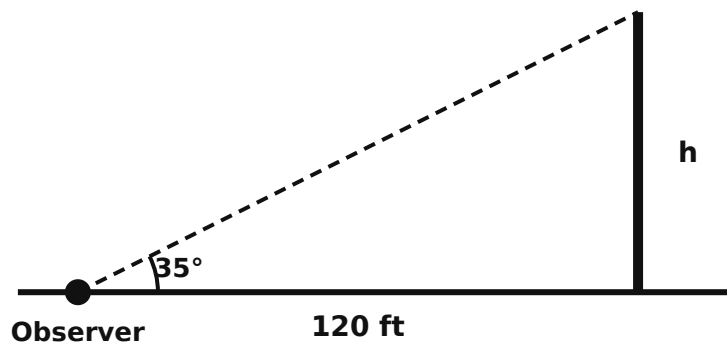
Question 3 - Three ratios [3 pts]

A right triangle has legs 20 and 21. (a) Find the hypotenuse. (b) Find the sine, cosine and tangent of the angle opposite the leg of length 20, as fractions.

Question 4 - Complementary [2 pts]

If $\sin A = \frac{8}{17}$ for an acute angle A, find $\cos(90^\circ - A)$ and $\cos A$.

Question 5 - Cliff height [2 pts]



Boat and cliff.

From a boat 120 feet from the base of a cliff, the angle of elevation to the top of the cliff is 35° .

Find the height of the cliff to the nearest foot.

Question 6 - Solve a right triangle [3 pts]

Solve the right triangle with hypotenuse 30 and an acute angle of 65° . Find the other angle and both legs to the nearest tenth.

Question 7 - Special triangle [2 pts]

A 45-45-90 triangle has a hypotenuse of 16. Find the length of each leg in simplest radical form.

Question 8 - Depression [2 pts]

From a cliff 60 feet above the sea, the angle of depression to a buoy is 8° . Find the distance from the base of the cliff to the buoy to the nearest foot.

Question 9 - Ramp [2 pts]

A loading ramp is 15 feet long and rises 4 feet. Find the angle it makes with the ground to the nearest tenth of a degree.