

Geometry

Module 2 – Exam

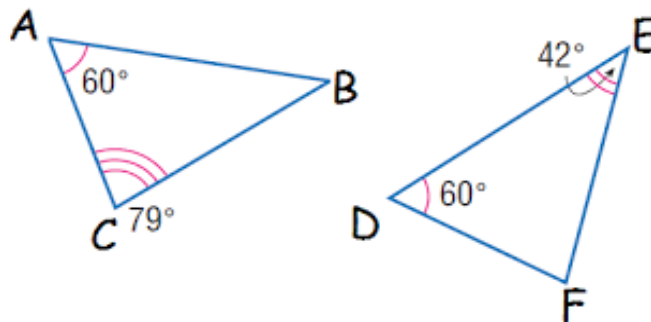


1. What is the sum of the internal angles of a parallelogram?

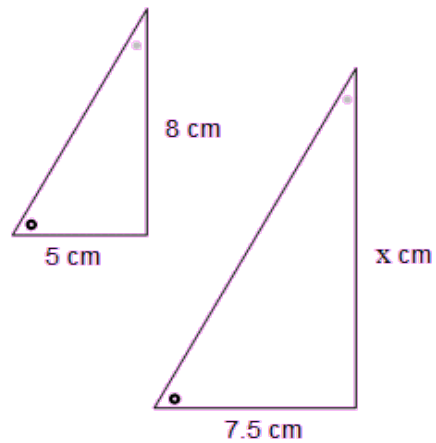
2. True or False: "A triangle's longest side is shorter than the sum of the other two sides."

3. Are these two triangles similar?

Why or why not?



4. Given: these two triangles are similar. Solve for x .



5. A right triangle has legs of length 6 and 8. What is the length of the hypotenuse?

6. A $30^\circ - 60^\circ - 90^\circ$ triangle's shortest leg is length 2. What are the lengths of the other leg, and the hypotenuse?

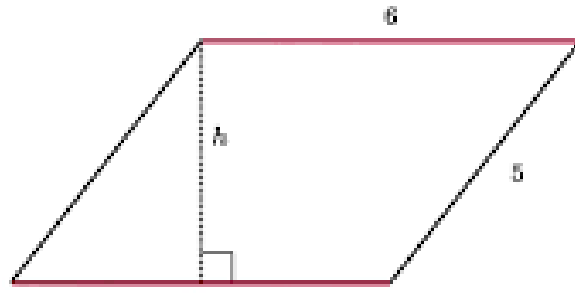
7. For a $45^\circ - 45^\circ - 90^\circ$ triangle, what is the cosine of one of the 45° angles? (Just write the answer as a fraction, not a decimal)

8. A triangle has an angle whose sine is 0.2419. If the hypotenuse is length 5, what is the length of the opposite leg?

Given: the shape is a parallelogram, and $h = 4$.

9. Find the area.

10. Find the sine of the angle opposite h .



11. Two similar right triangles have hypotenuses of 5 and 6. What is the ratio of their areas?

Answers:

1. 360°
2. True (Triangle Inequality Theorem)
3. No. (Their internal angles are not equal)
4. $\frac{5}{7.5} = \frac{8}{x}$ gives $x = 12$
5. 10 (Use the Pythagorean Theorem)
6. $2\sqrt{3}$ and 4
7. $\frac{1}{\sqrt{2}}$
8. $5 \times 0.2419 = 1.2095$
9. $6 \times 4 = 24$
10. $\frac{4}{5} = 0.8$
11. $\left(\frac{6}{5}\right)^2 = \frac{36}{25}$