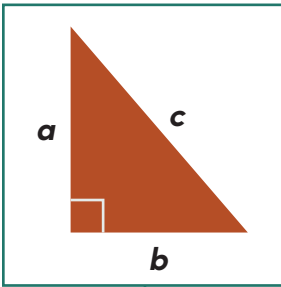


# CONVERSE OF THE PYTHAGOREAN THEOREM: IS IT A RIGHT TRIANGLE?



The converse of the Pythagorean theorem states that if  $a^2 + b^2 = c^2$ , then the triangle is a right triangle.

Use the converse of the Pythagorean theorem to determine if each triangle described below is a right triangle. Circle **yes** or **no** to show your answer.

<p>1. A triangle has sides with lengths of 4 inches, 5 inches, and 6 inches. Is it a right triangle?</p> $4^2 + 5^2 \stackrel{?}{=} 6^2$ $16 + 25 \neq 36$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>	<p>2. A triangle has sides with lengths of 5 meters, 12 meters, and 13 meters. Is it a right triangle?</p> $5^2 + 12^2 \stackrel{?}{=} 13^2$ $25 + 144 = 169$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>
<p>3. A triangle has sides with lengths of 8 feet, 15 feet, and 17 feet. Is it a right triangle?</p> $8^2 + 15^2 \stackrel{?}{=} 17^2$ $64 + 225 = 289$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>	<p>4. A triangle has sides with lengths of 9 centimeters, 10 centimeters, and 14 centimeters. Is it a right triangle?</p> $9^2 + 10^2 \stackrel{?}{=} 14^2$ $81 + 100 \neq 196$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>
<p>5. A triangle has sides with lengths of 12 inches, 8 inches, and 15 inches. Is it a right triangle?</p> $8^2 + 12^2 \stackrel{?}{=} 15^2$ $64 + 144 \neq 225$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>	<p>6. A triangle has sides with lengths of 16 feet, 12 feet, and 20 feet. Is it a right triangle?</p> $12^2 + 16^2 \stackrel{?}{=} 20^2$ $144 + 256 = 400$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>
<p>7. A triangle has sides with lengths of 9 meters, 41 meters, and 40 meters. Is it a right triangle?</p> $9^2 + 40^2 \stackrel{?}{=} 41^2$ $81 + 1,600 = 1,681$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>	<p>8. A triangle has sides with lengths of 11 feet, 61 feet, and 60 feet. Is it a right triangle?</p> $11^2 + 60^2 \stackrel{?}{=} 61^2$ $121 + 3,600 = 3,721$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>
<p>9. A triangle has sides with lengths of 72 meters, 32 meters, and 60 meters. Is it a right triangle?</p> $32^2 + 60^2 \stackrel{?}{=} 72^2$ $1,024 + 3,600 \neq 5,184$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>	<p>10. A triangle has sides with lengths of 50 inches, 14 inches, and 48 inches. Is it a right triangle?</p> $14^2 + 48^2 \stackrel{?}{=} 50^2$ $196 + 2,304 = 2,500$ <p style="text-align: center;"><b>yes</b>                      <b>no</b></p>