Converse of the Pythagorean Theorem: If a2 + b2 = c2, then a triangle is a right triangle.



**a2 + b2 = c2**

**82 + 152 ? 172**

**64 + 225 ? 289**

**289 = 289**

**This is a right triangle.**



**a2 + b2 = c2**

**22 + 52 ? 72**

**4 + 25 ? 49**

**29 ≠ 49**

**This is not a right triangle.**



**a2 + b2 = c2**

**222 + 242 ? 262**

**484 + 576 ? 676**

**1060 ≠ 676**

**This is not a right triangle.**

a = 12 ft

b = 16 ft

c = 25 ft

**a2 + b2 = c2**

**122 + 162 ? 252**

**144 + 256 ? 400**

**400 = 4400**

**This is a right triangle.**

a = 12 km

b = 35 km

c = 37 km

**a2 + b2 = c2**

**122 + 352 ? 372**

**144 + 1225 ? 1369**

**1369 = 1369**

**This is a right triangle.**

a = 20 ft

b = 21 ft

c = 30 ft

**a2 + b2 = c2**

**202 + 212 ? 292**

**400 + 441 ? 900**

**841 ≠ 900**

**This is not a right triangle.**