Englische Übungen zu Satz des Pythagoras

1. A right-angled triangle is given by its hypotenuse c = 51 mm and one of its legs a = 24 mm.
   a. Draw the triangle and measure the length of side b.
   b. Calculate the other leg by using Pythagoras' theorem.
   c. Find the area of the triangle.
   d. How long is h_c? Compare your calculation with the measurement in your drawing.

2. A right-angled triangle has an area of 45.36 cm^2 and the leg b = 18.9 cm. How long is the other leg a and the hypotenuse c of this triangle?

3. An isosceles triangle is given by its equally long legs a = b = 7.5 cm and its height h_c = 4.5 cm. Calculate the length of the base c and the area of the isosceles triangle!

4. Two of these trinagles are right-angled. Which ones?
   - O **A** 11.5 cm, 29.9 cm, 27.6 cm
   - O **B** 14.9 dm, 8.4 dm, 11.2 dm
   - O **C** 5.8 cm, 9.3 cm, 12.1 cm
   - O **D** 28 m, 45 m, 53 m

Vocabulary

Englisch	**Deutsch**
right-angled triangle (right triangle	rechtwinkeliges Dreieck
hypotenuse	Hypotenuse
measure	messen
Pythagoras theorem	Satz des Pythagoras
leg	Kathete
isosceles triangle	gleichschenkeliges Dreieck
leg	Schenkel
base	Basis

Solutions

1.

a. individual solution
b. b = 45 mm
c. A = 540 mm^2
d. ≈ 10.6 mm

2. a = 4.8 cm, c = 19.5 cm

3. c = 12 cm, A = 27 cm^2

4. A, D