

Pythagoras' Theorem *fluency*

 **a and b are the shorter sides. Find the hypotenuse c.**

1 $a = 6 \text{ cm}, b = 8 \text{ cm}$
 10 cm

2 $a = 5 \text{ cm}, b = 12 \text{ cm}$
 13 cm

3 $a = 9 \text{ cm}, b = 12 \text{ cm}$
 15 cm

4 $a = 8 \text{ cm}, b = 15 \text{ cm}$
 17 cm

5 $a = 7 \text{ cm}, b = 24 \text{ cm}$
 25 cm

6 $a = 20 \text{ cm}, b = 21 \text{ cm}$
 29 cm

 **c is the hypotenuse. Find the shorter side b.**

7 $a = 3 \text{ cm}, c = 5 \text{ cm}$
 4 cm

8 $a = 12 \text{ cm}, c = 13 \text{ cm}$
 5 cm

9 $a = 8 \text{ cm}, c = 17 \text{ cm}$
 15 cm

10 $a = 24 \text{ cm}, c = 25 \text{ cm}$
 7 cm

11 $a = 9 \text{ cm}, c = 15 \text{ cm}$
 12 cm

12 $a = 20 \text{ cm}, c = 29 \text{ cm}$
 21 cm

 **c is the hypotenuse. Find the missing side to 1 decimal place.**

13 $a = 4 \text{ cm}, b = 7 \text{ cm}$
 $c = 8.1 \text{ cm}$

14 $a = 5 \text{ cm}, c = 9 \text{ cm}$
 $b = 7.5 \text{ cm}$

15 $a = 3 \text{ cm}, b = 10 \text{ cm}$
 $c = 10.4 \text{ cm}$

16 $b = 6 \text{ cm}, c = 11 \text{ cm}$
 $a = 9.2 \text{ cm}$

17 $a = 2 \text{ cm}, b = 9 \text{ cm}$
 $c = 9.2 \text{ cm}$

18 $a = 8 \text{ cm}, c = 14 \text{ cm}$
 $b = 11.5 \text{ cm}$

 **c is the hypotenuse. Find the missing side to 1 decimal place.**

19 $a = 2.5 \text{ cm}, b = 6.1 \text{ cm}$
 $c = 6.6 \text{ cm}$

20 $a = 4.2 \text{ cm}, c = 7.5 \text{ cm}$
 $b = 6.2 \text{ cm}$

21 $a = 0.8 \text{ cm}, b = 1.5 \text{ cm}$
 $c = 1.7 \text{ cm}$

22 $b = 3.6 \text{ cm}, c = 9.4 \text{ cm}$
 $a = 8.7 \text{ cm}$

23 $a = 12.5 \text{ cm}, b = 4.8 \text{ cm}$
 $c = 13.4 \text{ cm}$

24 $a = 1.2 \text{ cm}, c = 3.7 \text{ cm}$
 $b = 3.5 \text{ cm}$

 **The sides of a triangle are given. Is it right angled? Write yes or no.**

25 5 cm, 12 cm, 13 cm
 yes

26 6 cm, 8 cm, 11 cm
 no

27 9 cm, 40 cm, 41 cm
 yes

28 7 cm, 8 cm, 10 cm
 no

29 10 cm, 24 cm, 26 cm
 yes

30 4 cm, 6 cm, 7 cm
 no