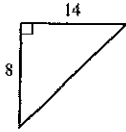# Pythagoras' theorem

All Multiple Choice

Name: _____

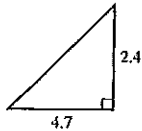**1** What is the value of the hypotenuse?

- A 11
- B 16
- C 19
- D 22

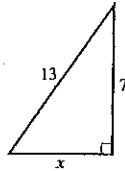**2** What is the value of the longest side?

- A 2.1
- B 3.4
- C 4.9
- D 5.3

3 The diagonal of a rectangle is 100 m. One side has a length of 80 m. The length of the other side is:
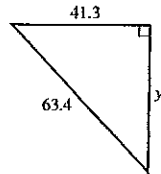- A 40 m
- B 50 m
- C 60 m
- D 70 m

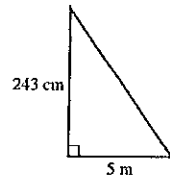**4** What is the value of the pronumeral? Answer in exact form.
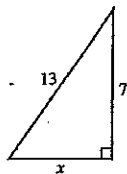
- A $\sqrt{218}$
- B $\sqrt{169}$
- C $\sqrt{120}$
- D $\sqrt{100}$

5 The value of the pronumeral is?
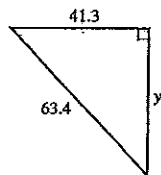
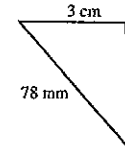- A 10.8
- B 12.7
- C 33.5
- D 48.1
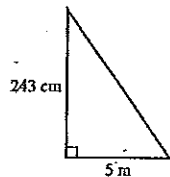
6

The length of the hypotenuse is closest to:
- A 556 cm
- B 589 cm
- C 610 cm
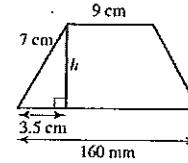- D 734 cm

7 The length of the third side is:
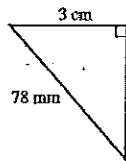
- A 61 mm
- B 72 mm
- C 78 mm
- D 83 mm

8 Jane drives 2.5 km north then 350 m east.
How far is she from her starting point (in km)?
- A 999 m
- B 1 km
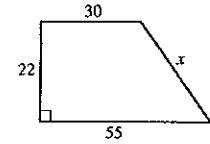- C 1.3 km
- D 2.52 km

Question 9 and 10 information

9 The opposite sides of a trapezium are 9 cm and 160 mm and the left slant height is 7 cm. The height, h, of the trapezium is?
- A 6 cm
- B 7 cm
- C 8 cm
- D 9 cm

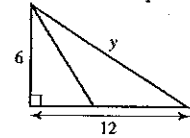**10** The length of the right slanting side is:
- A 6 cm
- B 7 cm
- C 8 cm
- D 9 cm

11 What is the value of the pronumeral x? Answer in exact form.
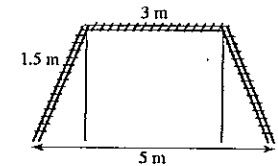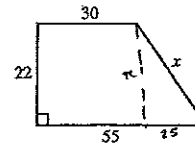

- A $\sqrt{3509}$
- B $\sqrt{1384}$
- C $\sqrt{1225}$
- D $\sqrt{1109}$
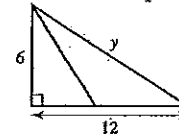
12 What is the value of the pronumeral y?
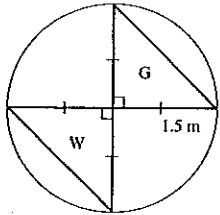

- A 14.3
- B 13.4
- C 12.2
- D 11.5

13 At a childrens' playground, the monkey bars are made up of 2 ladders connected by a 3-m-long horizontal ladder. The 2 ladders are 5 m apart and each ladder has sloping sides of 1.5 m as shown. The height of the horizontal ladder off the ground is:

- A 1.5 m
- B 1.4 m
- C 1.2 m
- D 1.1 m

14 Jane and Yvette go bushwalking. They walk 4.5 km south, 2.3 km west then 1.9 km north. The distance they are from the starting point is:
A 1.2 km
B 1.9 km
C 2.8 km
D 3.5 km

15 Thang has a circular pond in her garden. She constructs 2 triangular wire meshes as shown, in one she puts goldfish (G) and in the other she puts water plants (W). The amount of wire mesh needed is:
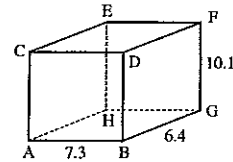

A 9 m
B 10.2 m
C 15.3 m
D 33.6 m

16 The set of 3 numbers for the sides of a right-angled triangle is:
A 6, 8, 10
B 2, 7, 9
C 11, 3, 15
D 14, 19, 22

17 Using the Pythagorean triad 3, 4, 5, another Pythagorean triad would be:
A 6, 4, 10
B 36, 12, 50
C 9, 12, 15
D 12, 8, 10

Question 18 and 19 information

If the smallest number of a Pythagorean triad is 15:

18 The middle number is:
A 110
B 111
C 112
D 113

19 The third number (the longest side) is:
A 110
B 111
C 112
D 113

20 Using the value of $x = 5$ and $y = 8$ a Pythagorean triad would be:
A 25, 13, 64
B 45, 25, 64
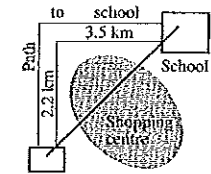C 25, 40, 64
D 39, 80, 89

Question 21 and 22 information

21 What is the distance BH in the figure?
A 9.7
B 10.3
C 12.5
D 16.2

22 The distance BE is:
A 11.3
B 12.4
C 13.3
D 14

23 Sita tries to put his 30-cm ruler in his pencil box. His box case measures 7 cm by 12 cm by 20 cm. The ruler is hanging out by:
A 4 cm
B 5 cm
C 6 cm
D 7 cm

24 An ice-cream cone has a diameter of 5 cm. The sloping edge of the cone has a length of 9 cm. The height of the cone is:
A $\sqrt{74.75}$
B $\sqrt{78}$
C $\sqrt{80.75}$
D $\sqrt{87.25}$

25 Shukla and Leo are walking to school. Shukla decides to take a short cut and walks diagonally through the shops while Leo walks along the path.
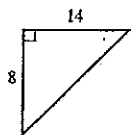

What is the difference between the 2 paths?
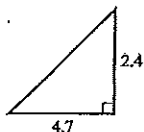A 1.6 km
B 0.5 km
C 0.4 km
D 0.3 km

Pythagoras' theorem

All Multiple Choice

1 What is the value of the hypotenuse?

14
8

- A 11
- B 16 ✓
- C 19
- D 22

2 What is the value of the longest side?

2.4
4.7

- A 2.1
- B 3.4
- C 4.9
- D 5.3 ✓

**3** The diagonal of a rectangle is 100 m. One side has a length of 80 m. The length of the other side is:
- A 40 m
- B 50 m
- C 60 m ✓
- D 70 m

4 What is the value of the pronumeral? Answer in exact form.

13 7
x

- A $\sqrt{218}$
- B $\sqrt{169}$
- C $\sqrt{120}$ ✓
- D $\sqrt{100}$

5 The value of the pronumeral is?

41.3
63.4 y

- A 10.8
- B 12.7
- C 33.5
- D 48.1 ✓

6

243 cm
5 m

The length of the hypotenuse is closest to:
- A 556 cm ✓
- B 589 cm
- C 610 cm
- D 734 cm

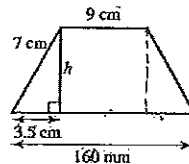**7** The length of the third side is:

3 cm
78 mm

- A 61 mm
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8 Jane drives 2.5 km north then 350 m east.
How far is she from her starting point (in km)?
- A 999 m
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9 cm
7 cm h
3.5 cm
160 mm

9 The opposite sides of a trapezium are 9 cm and 160 mm and the left slant height is 7 cm. The height, h, of the trapezium is?
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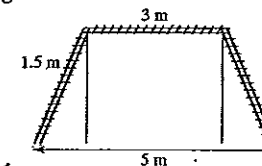**11** What is the value of the pronumeral x? Answer in exact form.

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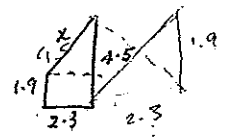
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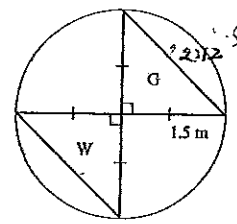1.5 m
5 m

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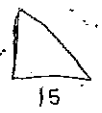- A 6, 8, 10
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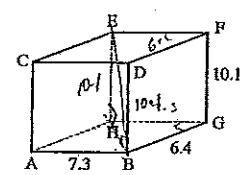- B 111
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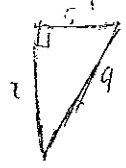- D 16.2

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- B 12.4
- C 13.3
- D 14

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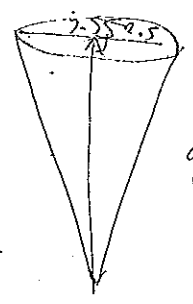
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