

Pythagoras' theorem

Topic Test

PART A

Instructions

This part consists of 12 multiple-choice questions

Each question is worth 1 mark

Fill in only ONE CIRCLE for each question

Calculators are NOT allowed

Time allowed: 15 minutes

Total marks = 12

		Marks
1	A triangle is said to satisfy the rule $c^2 = a^2 + b^2$ for which special triangle? ☐ (A) acute angled ☐ (B) right angled ☐ (C) obtuse angled ☐ (D) none of these	1
2	The longest side of a right angled triangle is called the ☐ (A) shortest side ☐ (B) middle side ☐ (C) hypotenuse ☐ (D) none of these	1
3	Given that $c^2 = a^2 + b^2$ and $a = 8$, $b = 15$, what is the value of c ? ☐ (A) 17 ☐ (B) 23 ☐ (C) 289 ☐ (D) 529	1
4	Pythagoras' theorem can be applied to ☐ (A) acute angled triangles ☐ (B) obtuse angled triangles ☐ (C) right angled triangles ☐ (D) any triangle	1
5	The hypotenuse of a right angled triangle is 17 cm. If one side is 15 cm, the third side is ☐ (A) 14 cm ☐ (B) 12 cm ☐ (C) 10 cm ☐ (D) 8 cm	1
6	If two sides of a right angled triangle are 2.4 m and 1 m then the hypotenuse is ☐ (A) 2.4 m ☐ (B) 2.6 m ☐ (C) 3.4 m ☐ (D) 3.8 m	1
7	The Pythagorean result for a triangle ABC right angled at C is ☐ (A) $a^2 = b^2 + c^2$ ☐ (B) $b^2 = a^2 + c^2$ ☐ (C) $c^2 = a^2 + b^2$ ☐ (D) none of these	1
8	The hypotenuse of a right angled triangle is opposite to the ☐ (A) acute angle ☐ (B) right angle ☐ (C) obtuse angle ☐ (D) none of these	1
9	If two shorter sides of a right angled triangle are 7 m and 8 m, then the hypotenuse is ☐ (A) $\sqrt{65}$ ☐ (B) $\sqrt{85}$ ☐ (C) $\sqrt{113}$ ☐ (D) $\sqrt{193}$	1
10	In a triangle ABC right angled at C, the hypotenuse is named as ☐ (A) a ☐ (B) b ☐ (C) c ☐ (D) none of these	1
11	If two sides of a right angled triangle are 6 cm and 8 cm, then the hypotenuse is ☐ (A) 10 cm ☐ (B) 9.4 cm ☐ (C) 12 cm ☐ (D) 14 cm	1
12	If $n^2 = 2304$ then n equals ☐ (A) 38 ☐ (B) 42 ☐ (C) 48 ☐ (D) 52	1

Total marks achieved for PART A

12

Pythagoras' theorem

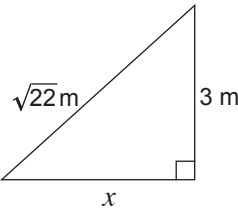
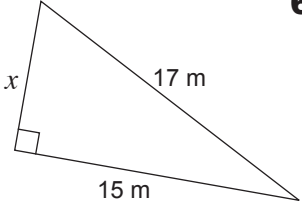
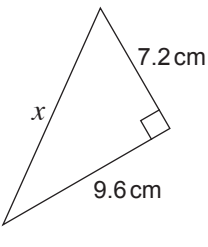
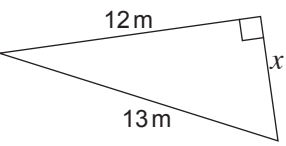
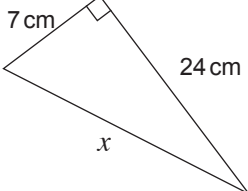
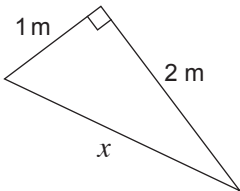
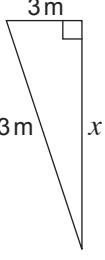
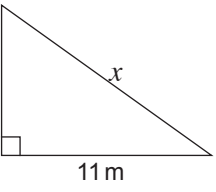
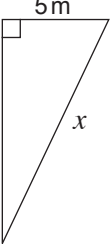
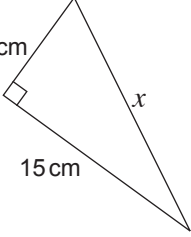
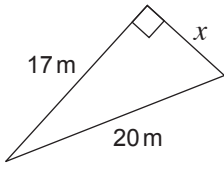
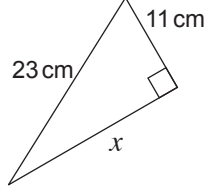
Topic Test

PART B

Instructions This part consists of 15 questions
Each question is worth 1 mark
Write answers in the answers-only column

Time allowed: 20 minutes

Total marks = 15

Questions		Answers only	Marks
1	If $n^2 = 3844$ then find the value of n	1	1
2	Is $\{6, 8, 10\}$ a Pythagorean triad?	2	1
3	Prove that $\triangle PQR$ is a right angled triangle.	3	1
Find the length of the unknown side in the following triangles correct to two decimal places.			
4		4	1
5		5	1
6		6	1
7		7	1
8		8	1
9		9	1
10		10	1
11		11	1
12		12	1
13		13	1
14		14	1
15		15	1

Total marks achieved for PART B

15