4.14 Pythagoras' Theorem: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A TV screen is 4 cm wide and 3 cm high. Calculate the length of its diagonal.

(3)

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2 A ladder 20 m long leans against a vertical wall. The foot of the ladder is 12 m from the wall. How high up the wall does the ladder reach?

(3)

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3 Leo walks 9 km east and then 12 km north. How far is Leo from the starting point in a straight line?

(3)

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4 A rectangle is 15 cm long and 14 cm wide. Work out the length of a diagonal. Give your answer correct to 1 decimal place.

(3)

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5 A rectangle is 9 cm long and 5 cm wide. Work out the length of a diagonal. Give your answer correct to 1 decimal place.

(3)

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6 Uma walks 20 km east and then 21 km north. How far is Uma from the starting point in a straight line?

(3)

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7 Work out the distance between the points (-2, 1) and (10, 17).

(3)

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8 A rectangle is 20 cm wide. Its diagonal is 29 cm. Work out its perimeter.

(4)

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Mark scheme · 4.14 Pythagoras'Theorem: 30-minute Pack

Question 1

$3^2 + 4^2$	M1
$\sqrt{25}$	M1
5 cm cao	A1

Answer: **5 cm**

Question 2

$20^2 - 12^2$	M1
$\sqrt{256}$	M1
16 m cao	A1

Answer: **16 m**

Question 3

$9^2 + 12^2$	M1
$\sqrt{225}$	M1
15 km cao	A1

Answer: **15 km**

Question 4

$15^2 + 14^2 = 421$	M1
$\sqrt{421}$	M1
20.5 cm cao	A1

Answer: **20.5 cm**

Question 5

$9^2 + 5^2 = 106$	M1
$\sqrt{106}$	M1
10.3 cm cao	A1

Answer: **10.3 cm**

Question 6

$20^2 + 21^2$	M1
$\sqrt{841}$	M1
29 km cao	A1

Answer: **29 km**

Question 7

differences 12 and 16	M1
$\sqrt{12^2 + 16^2}$	M1
20 cao	A1

Answer: **20**

Question 8

$29^2 - 20^2$	M1
length = 21 cm	A1
2 x (20 + 21)	M1
82 cm cao	A1

Answer: **82 cm**

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