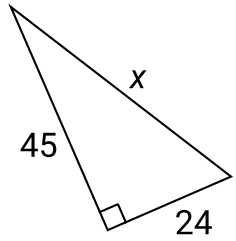
Year 9 Class 16 questions

Q1

Find the value of x. [ ]

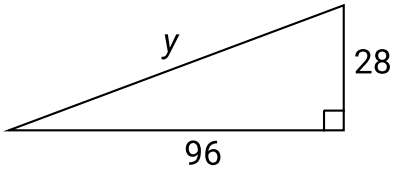
51



Q2

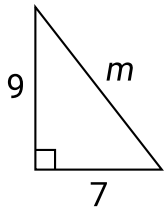
Find the value of y. [ ]

100



Q3

Find m correct to 1 decimal place.

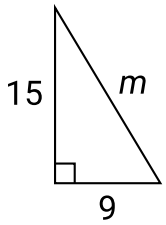


[ ] (1 d.p.)

11.4

Q4

Find m correct to 1 decimal place.

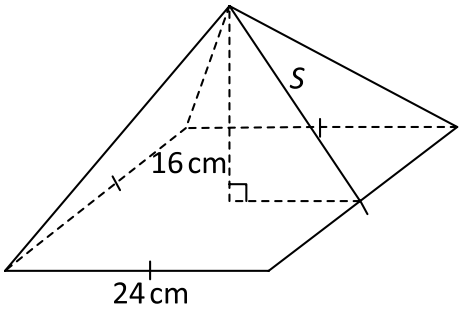


[ ] (1 d.p.)

17.5

Q5

The base sides of a square pyramid are 24 cm long. The perpendicular height is 16 cm. What is the slant height?



[ ] cm

20

Q6

A 4.5 metre ladder is placed against a wall. The foot of the ladder is 130 cm from the base of the wall. How far up the wall does the ladder reach?

[ ] m (1 d.p.) 4.3

Q7

$\{m, 64, 80\}$ is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of m.

$m^2 + 64^2 = 80^2$

$m^2 = 80^2 - 64^2$

$m^2 =$ [ ]

2304

$m = \sqrt{\ }$ [ ]

2304

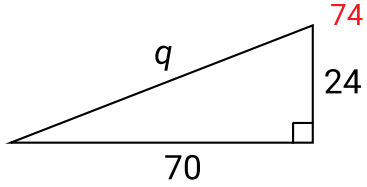
$\therefore m =$ [ ]

48

Q8

Find the value of q.

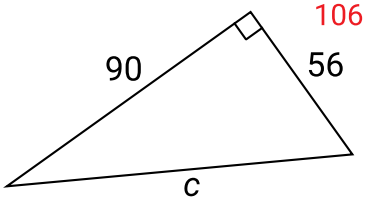
74



Q9

Find the value of c.

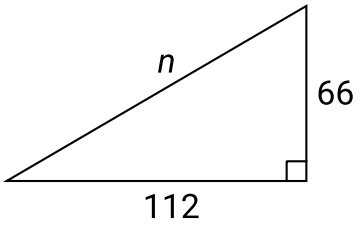
106



Q10

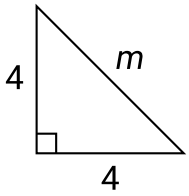
Find the value of n.

130



Q11

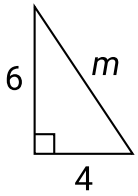
Written as a surd, m equals



- ○ $\sqrt{39}$
- → ○ $\sqrt{32}$
- ○ $\sqrt{42}$
- ○ $\sqrt{16}$

Q12

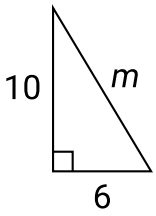
Written as a surd, m equals



- → ○ $\sqrt{52}$
- ○ $\sqrt{20}$
- ○ $\sqrt{48}$
- ○ $\sqrt{57}$

Q13

Written as a surd, m equals



- ○ $\sqrt{143}$
- → ○ $\sqrt{136}$
- ○ $\sqrt{32}$
- ○ $\sqrt{120}$

Q14

Draw a diagram - it will help.

What is the length of the equal sides of an isosceles right-angled triangle, with hypotenuse 15 cm?

cm (1 d.p.)

10.6

Q15

Draw a diagram - it will help.

In an orienteering challenge, Mary runs 600 m South, 450 m West and then 100 m North. How far is she from the starting point?

m (nearest metre)

673

Q16

Draw a diagram - it will help.

The diagonal of a rectangle is 5 cm and its length is 4 cm. Find the width of the rectangle.

[ ] cm

3

Find the area of the rectangle.

[ ] cm²

12

Q17

A triangle has sides of 7.3 m, 8.2 m and 10.6 m. Is it right-angled?

Yes → No

Q18

A triangle has sides of 25 m, 7 m and 24 m. Is it right-angled?

→ Yes No

Q19

{10, 24, *m*} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of *m*.

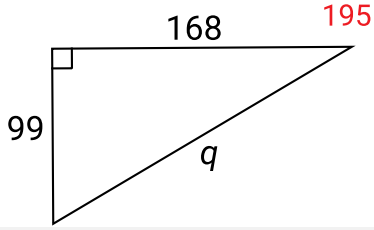
m = [ ]

26

Q20

Find the value of *q*. [ ]

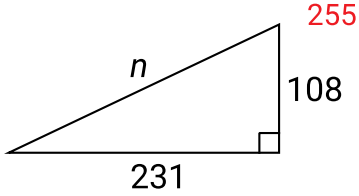
195



Q21

Find the value of *n*. [ ]

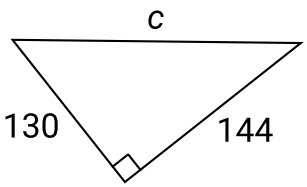
255



Q22

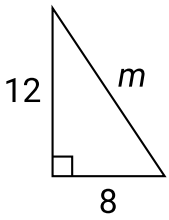
Find the value of *c*. [ ]

194



Q23

Written as a surd, *m* equals



→ ○ $\sqrt{208}$

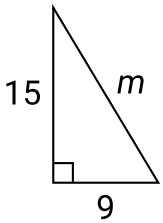
○ $\sqrt{192}$

○ $\sqrt{214}$

○ $\sqrt{40}$

Q24

Written as a surd, *m* equals



○ $\sqrt{48}$

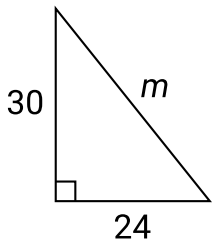
○ $\sqrt{270}$

○ $\sqrt{314}$

→ ○ $\sqrt{306}$

Q25

Written as a surd, m equals



- ○ $\sqrt{1478}$
- ○ $\sqrt{1440}$
- ○ $\sqrt{108}$
- → ○ $\sqrt{1476}$

Q26

Draw a diagram - it will help.

The area of a rectangle is 60 cm². If the width is 5 cm, what is the length of the diagonal?

[ ] cm

13

Q27

Draw a diagram - it will help.

The area of a square is 25 cm². What is the length of the diagonal?

[ ] cm (1 d.p.)

7.1

Q28

{16, m, 34} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of m.

m = [ ]

30

Q29

{48, m, 73} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of m.

m = [ ]

55

Q30

{m, 48, 52} is a set of 3 numbers written in ascending order which form a Pythagorean triad. Find the value of m.

m = [ ]

20