

- 7 Wire fencing is to be put around a rectangular field.
The field measures 50 m by 32 m, each correct to the nearest metre.
Taja has 165 m of fencing to the nearest metre.

Show clearly how you decide whether she is certain to have enough fencing.

[2]

2

- 8 (a) Factorise.

$$x^2 - 81$$

(a) [1]

- (b) Rearrange

$$C = 5\sqrt{m} + 3$$

to make m the subject.

(b) $m =$ [3]

4

- 9 Caitlin is making some spherical balls from clay.

How many balls of diameter 4.5 cm can she make
from 500 cm³ of clay?

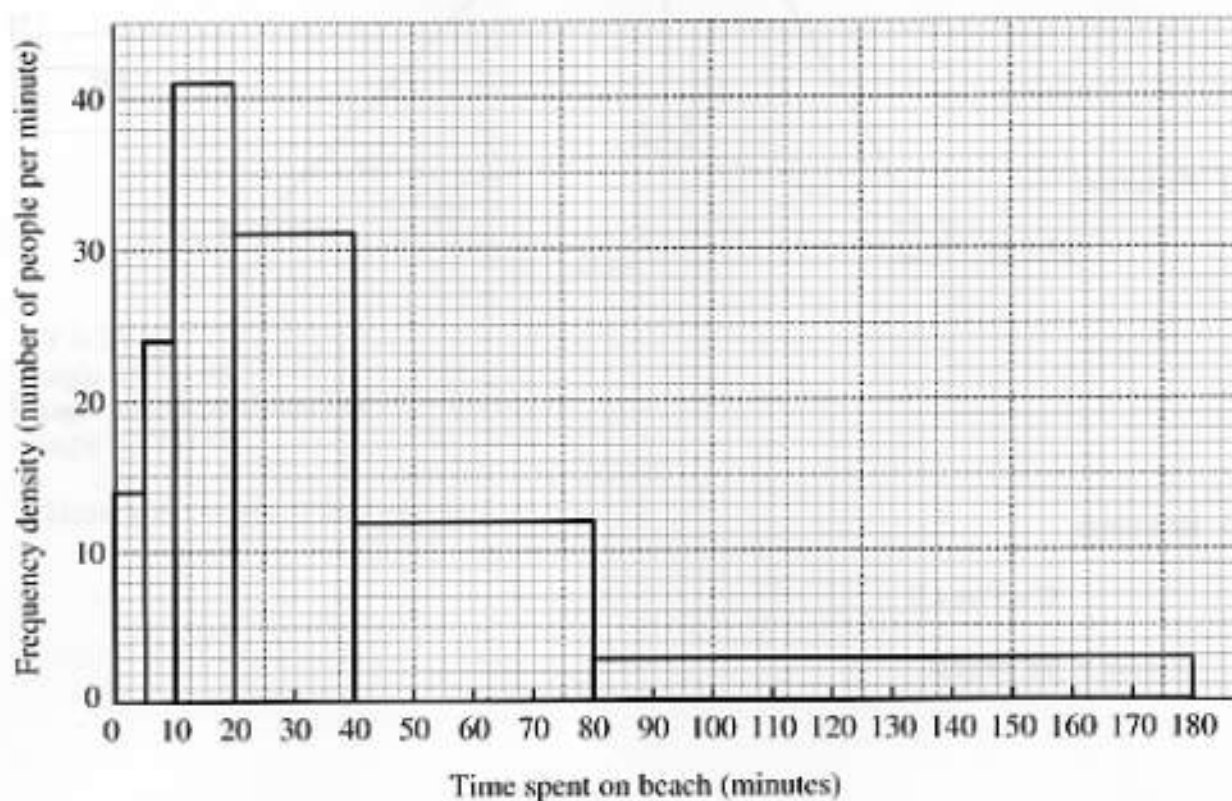
..... balls [4]

4

[Turn over]



The histogram below shows the length of time spent by people on a beach one afternoon.

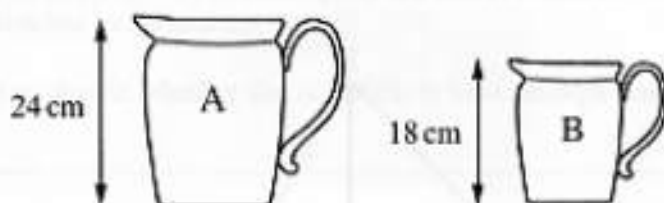


How many people visited the beach that afternoon?

..... people [3]

3

- 11 These two jugs are mathematically similar.



Jug A has a height of 24 cm and jug B has a height of 18 cm.
The capacity of jug B is 520 ml.

Calculate the capacity of jug A.

..... ml [3]

3

- 12 You are given that $y \propto x^2$ and $x = 4$ when $y = 7$.

(a) Find a formula for y in terms of x .

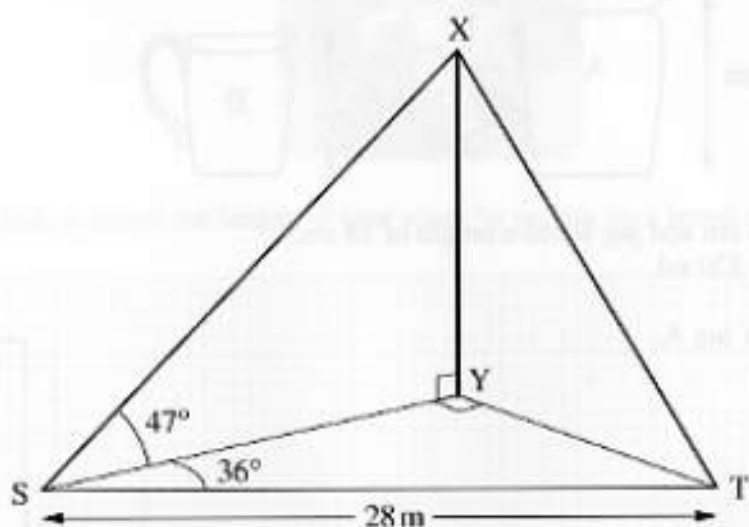
(a)..... [2]

(b) Find y when $x = 6$.

(b)..... [2]

4

- 13 A vertical flagpole XY stands on horizontal ground.
It is supported by two wires XS and XT , fixed to the ground.



ST is 28 m .
Angle $SYT = 90^\circ$.
Angle $YST = 36^\circ$.
Angle $XSX = 47^\circ$.

Calculate the height of the flagpole.

..... m [5]

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