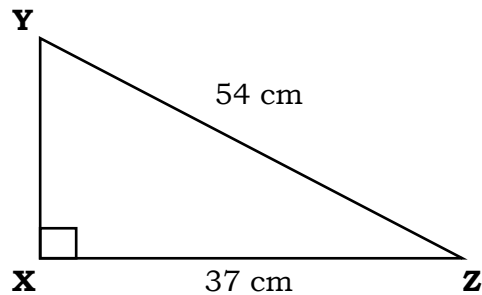


**HIGHER TIER
MINI PRACTICE EXAM 3**

**CALCULATOR ALLOWED
20 MINUTES ALLOWED**

1.
Find YX to 2 significant figures.



(3)

2.
Ricky has forgotten his password for his computer.
His password contains 6 numbers.
There are no zeros in his password.
The last digit of the password is an even number.
Work out how many different passwords are possible.

(2)

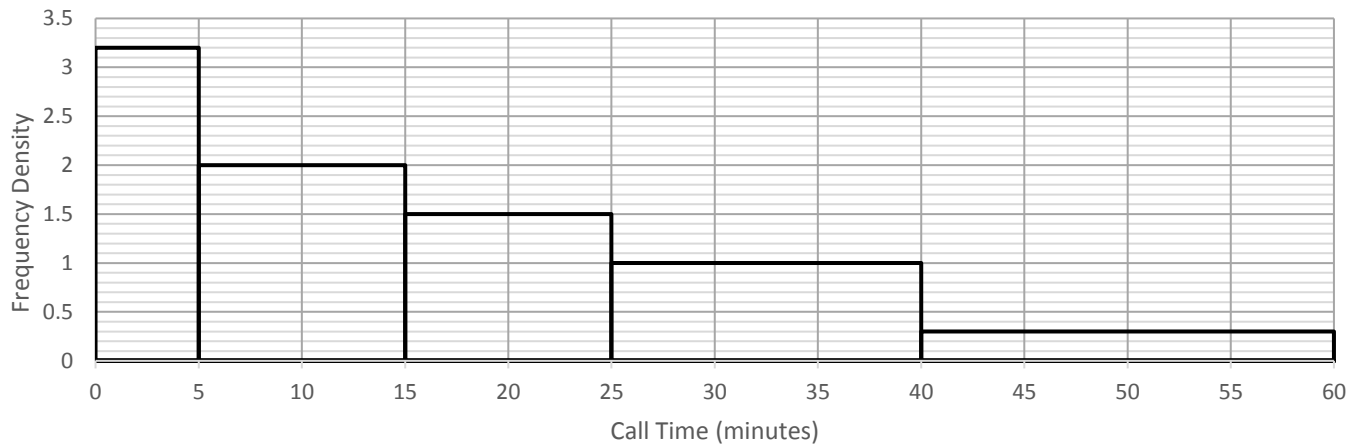
3.
Expand and simplify $(2x - 1)(3x + 2)(x - 4)$

(4)

4.

A call centre monitored the time spent on each call one day.

The results are shown on the histogram below.



(a) How many calls lasted less than 5 minutes?

(2)

(b) Estimate how many calls lasted more than 30 minutes.

(3)

5.

f , g and h are functions.

$$f(x) = x^2 - 13$$

$$g(x) = x + 1$$

$$h(x) = \frac{5}{x}$$

(a) Find $h(0.5)$

(1)

(b) Solve $fg(x) = 0$, giving your solutions to 1 decimal place.

(5)