



CITY OF LONDON
FREEMEN'S SCHOOL

SAMPLE ENTRANCE EXAMINATION PAPER

For pupils currently in Year 7

MATHEMATICS

- The test is one hour long.
- No calculators to be used.
- Show all working beside the relevant question.
- Write in ink, draw diagrams when necessary in pencil.
- Do not write in the right hand margin.

1. Calculate:

a) 1.5×785 (1)

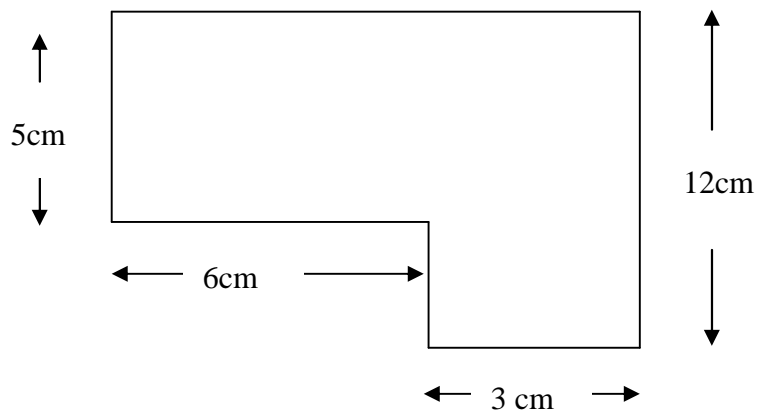
b) $1710 \div 15$ (1)

c) $5^2 - (8 - 2 \times 3)$ (2)

d) $-5 + 12$ (1)

e) $18 - 26$ (1)

2. Find the area and perimeter of the shape below:



Perimeter = (2)

Area = (2)

3. In a bag there are 5 blue counter, six yellow counters, two white counters and three red counters.

I take one counter form the bag without looking

What is the probability that it is

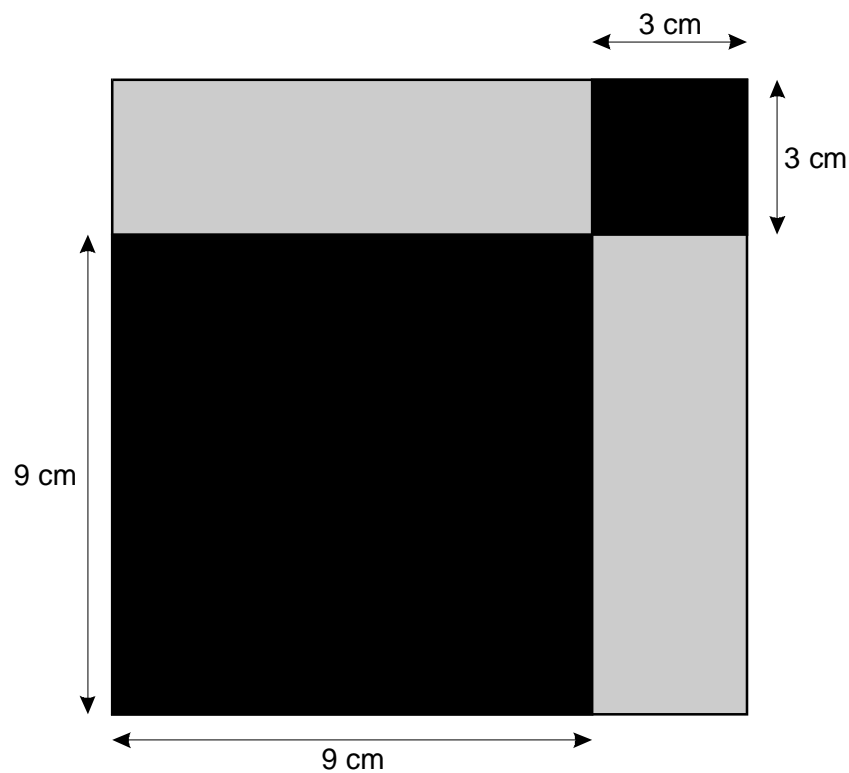
a) yellow? (1)

b) red or blue? (1)

c) black ? (1)

4. a) $\frac{2}{3} - \frac{1}{2}$ (2)
- b) $3\frac{2}{5} + 1\frac{1}{6}$ (2)
- c) $\frac{4}{7} \times 1\frac{4}{5}$ (2)
- d) $\frac{6}{11} \div \frac{2}{3}$ (2)

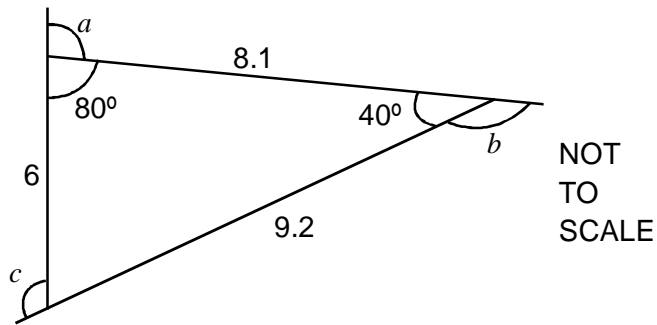
5. Two parts of this square design are shaded black.
Two parts are shaded grey.



Show that the ratio of black to grey is 5 : 3 (3)

6. Sharon is drawing shapes on her computer.

(a) She wants to draw this triangle. She needs to know angles a , b and c .



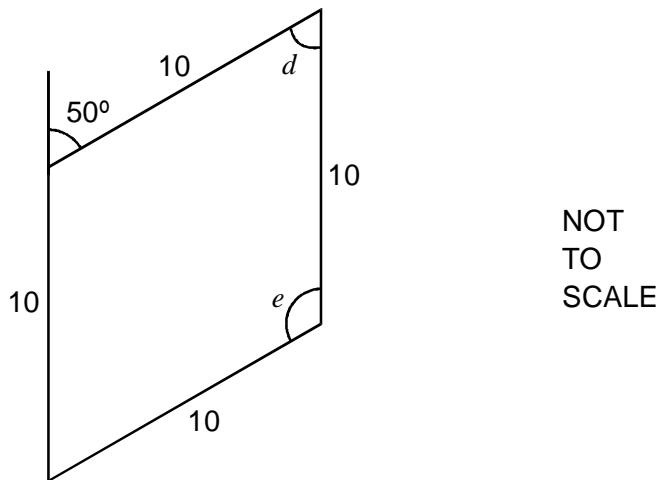
Calculate angles a , b and c .

$a = \dots\dots\dots^\circ$ (1)

$b = \dots\dots\dots^\circ$ (1)

$c = \dots\dots\dots^\circ$ (1)

(b) Sharon draws a rhombus:



Calculate angles d and e .

$d = \dots\dots\dots^\circ$ (1)

$e = \dots\dots\dots^\circ$ (1)

7. Convert the following into the units shown

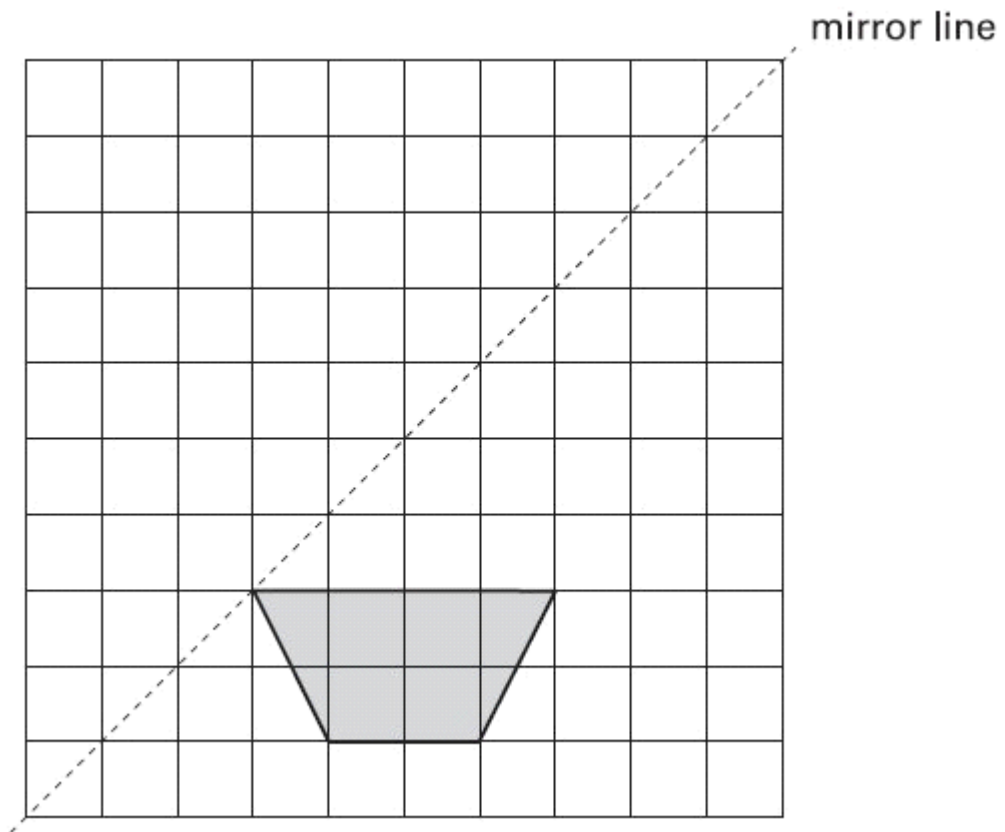
a) $2 \text{ km} = \underline{\hspace{2cm}} \text{ m}$ (1)

b) $150 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$ (1)

c) $1.2 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$ (1)

d) $2.5 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$ (2)

8. Draw the reflection of this shape.



9. Solve the following equation (2)

$5 + 2x = 15$ (2)

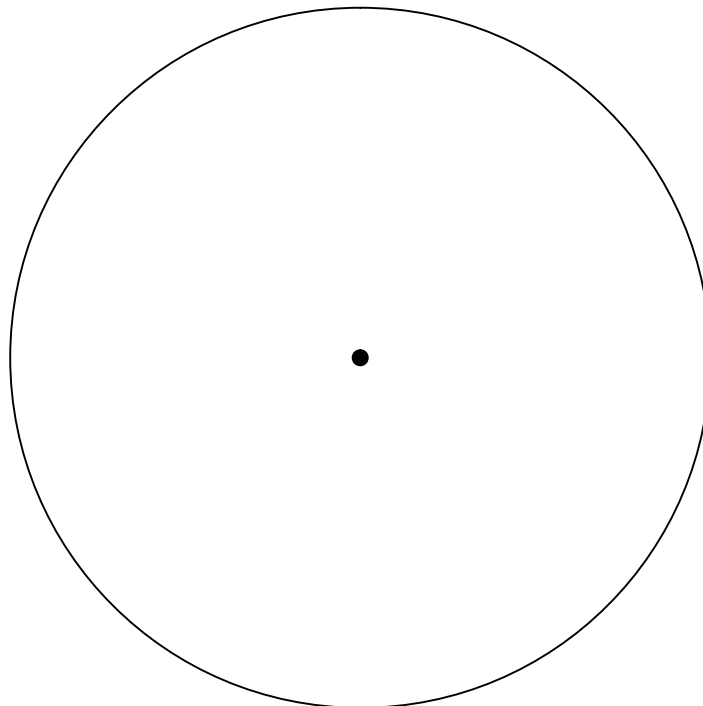
10. Continue the following sequence

1 4 9 16 _____

(3)

11. Draw a pie chart to show the following information:

Favourite Colour	Number of people
Red	4
Blue	6
Yellow	5
Green	3



(4)

End of test