Y7 OCTOBER ASSESSMENT
Non-Calculator
Time allowed: 1 hour

Name:......WORKED SOLUTIONS............ Form:.......

Maths Teacher:.....................................

1 What is $\frac{4}{9}$ of 1800?

[2 marks]

$$\frac{1}{9} \text{ of } 1800 = 1800 \div 9$$
$$= 200$$

$$\frac{4}{9} = 200 \times 4$$
$$= 800$$

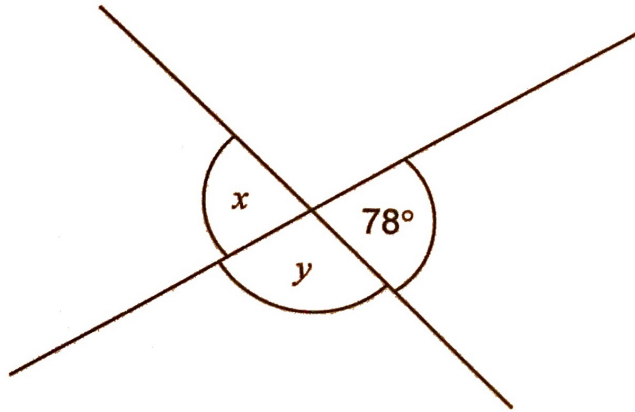Answer _____800_____

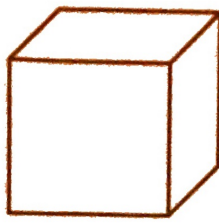**2** What are the sizes of the angles marked x and y?

[3 marks]

Not drawn accurately

$x = 78°$ (vertically opposite angles are equal)
$y = 180 - 78$ (angles on a straight line sum to 180°)

$x = $ _____78°_____ degrees

$y = $ _____102_____ degrees

3 (a)

Each edge of the cube is 4 cm long.

Work out the volume of the cube.

Remember to give the units in your answer.

[3 marks]

Volume = 4 × 4 × 4

Answer 64 cm³

3 (b) Here is the net of a cuboid.

10 cm

2 cm

Not drawn accurately

5 cm

5 cm

2 cm

10 cm
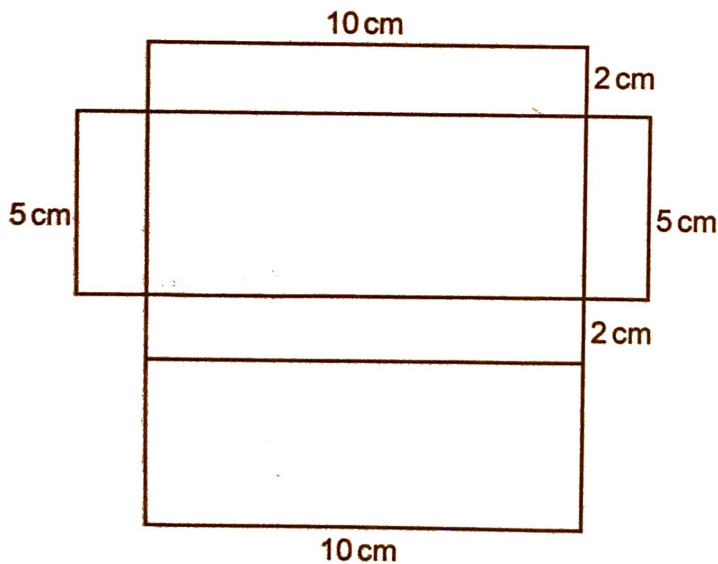
Work out the volume of the cuboid.

[2 marks]

Volume = 10 × 5 × 2

Answer 100 cm³

4 Work out $\frac{5}{8} \times 3$

Give your answer as a mixed number. **[2 marks]**

$$\frac{5}{8} \times 3 = \frac{15}{8}$$

Answer $1\frac{7}{8}$

5 Here are some descriptions of quadrilaterals.

Give the name of each one to complete the table.

[3 marks]

Description	Name of quadrilateral
All sides equal All angles 90° 4 lines of symmetry	Square
2 pairs of equal sides All angles 90° 2 lines of symmetry	Rectangle ~~Rhombus~~
All sides equal **No** 90° angles Diagonals cross at 90°	Rhombus
2 pairs of equal sides One pair of equal angles Diagonals cross at 90°	Kite

6 Work out $\frac{2}{7} + \frac{3}{10}$ ← *Need a common denominator*

[2 marks]

$$\frac{2}{7} = \frac{20}{70} \qquad \frac{3}{10} = \frac{21}{70}$$

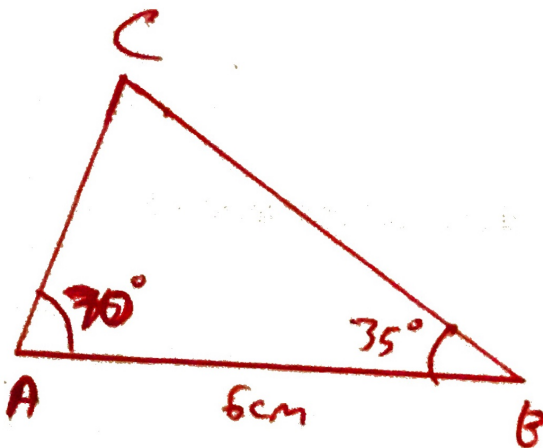$$\therefore \quad \frac{2}{7} + \frac{3}{10} = \frac{20}{70} + \frac{21}{70}$$

Answer $\frac{41}{70}$

7 Draw the triangle ABC, where

- AB = 6 cm
- angle ABC = 35°
- angle CAB = 70°

[4 marks]

8 Work out $8\frac{1}{6} - 2\frac{3}{5}$

Give your answer as a mixed number.

[3 marks]

$$= \frac{49}{6} - \frac{13}{5}$$

$$= \frac{245}{30} - \frac{78}{30} = \frac{167}{30}$$

Answer $5\frac{17}{30}$

9 (a) Work out $\frac{1}{4} \div 3$

[1 mark]

$$\div \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$$

Answer $\frac{1}{12}$

9 (b) How many minutes are there in one-third of a quarter of an hour?

[2 marks]

$$60 \div 4 = 15$$
$$15 \div 3 = 5$$

Answer **5**

10   In a box of chocolates

- one-fifth are plain chocolate
- one-sixth are white chocolate
- the other 38 are milk chocolate.

How many chocolates are there in the box?

[3 marks]

$$\frac{1}{5} + \frac{1}{6} = \frac{6}{30} + \frac{5}{30} = \frac{11}{30}$$

$$\therefore \frac{19}{30} \text{ left}$$
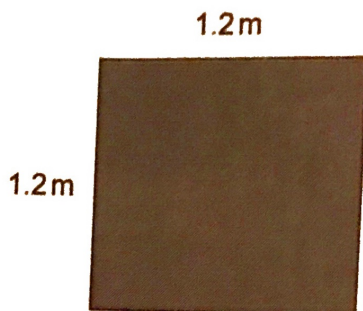
$$38 = \frac{19}{30} \text{ of box}$$

$$38 \div 19 = 2 = \frac{1}{30} \text{ of box}$$

$$\therefore 2 \times 30 = \text{whole box}$$

Answer   60

11

1.2 m

1.2 m

What is the total area covered by 40 of these carpet tiles?

[4 marks]

One tile $= 1.2 \times 1.2$
$= 1.44 \, m^2$

40 tiles $= 1.44 \times 40$

Answer 57.6 m²

12

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  4 3 □ 8 2
  8 6 □ 9 1
+ 1 3 0 1 7 3
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Must add to 10 and be the same

The missing digit in each number is the same.

What is the missing digit?

[2 marks]

Answer 5

13 Change 73 520 000 centimetres into **kilometres**.

[3 marks]

$73\,520\,000 \div 100 = 735200 \text{ meters}$

$735200 \div 1000 = 735.2 \text{ Km}$

Answer ___735.2___ km

14 A school day lasts from 9.00 am to 3.45 pm
There are six lessons, one break and lunchtime.

Each lesson lasts 55 minutes.
Break lasts 25 minutes.

How long is lunchtime?

[5 marks]

Total lesson times $= 6 \times 55$

$= 330$ minutes

$+ 25$ min break $= 355$ minutes

School day lasts 6 hrs 45 mins $= 405$ minutes

Lunch duration $= 405 - 355$

Answer 50 minutes

15 **Three** prime numbers add up to 30

Give an example of what the three prime numbers could be.

[2 marks

Options : 2, 5, 23

2, 1b, L7

Answer _____ and _____ and _____

16 A bag of flour weighs 2.7 kilograms.
It is split into five equal parts.

What does one part weigh?
Give your answer in grams.

[3 marks]

$2.7 kg = 2700 g$

$$\text{One part} = 5 \overline{)2700} = 0540$$

Answer   540g

17 Which is bigger? 2^3 or $\sqrt{65}$

Give a reason for your answer.

[2 mark

$2^3 = 2 \times 2 \times 2 = 8$

$\sqrt{64} = 8 \Rightarrow \sqrt{65}$ more than 8

$\sqrt{65}$ bigger

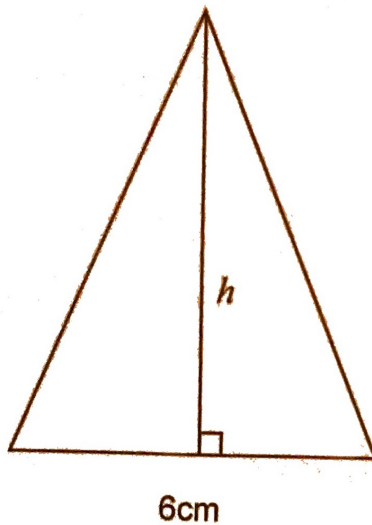**18** A number has eight factors.

Five of the factors are 1, 2, 3, 5 and 10

What are the other three factors?

[3 marks]

30 is the lowest number 1, 2, 3, 5, 10 are all factors of. 30 also has 6, 15 and 30 as factors so has a total of 8 factors

Answer 6 and 15 and 30

19

6cm

The area of the triangle is 27 cm^2

What is the height of the triangle, h?

[3 marks]

$$Area = \frac{base \times height}{2}$$

$$\therefore 27 \times 2 = base \times height$$
$$54 = 6 \times height$$
$$height = 9 cm$$

Answer _____ 9 cm