# EPSOM

## COLLEGE

**11+ MATHEMATICS SAMPLE PAPER**
**Time Allowed: 30 minutes**

No calculator permitted.
Show all your working.

Do not worry if you do not finish all questions but if you do finish use the time to check your answers.

**Q1.**

Work out     342 × 24

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**(Total for Question is 3 marks)**

**Q2.**

There are 120 people at a party.

$\frac{1}{3}$ of the people leave the party.

Work out the number of people still at the party.

...........................................................

**(Total for question = 3 marks)**

**Q3.**

A company has a Norwich office and an Ipswich office.

30 people work in the Norwich office
and 20 people work in the Ipswich office.

On Tuesday

12 people from the Norwich office go to work in the Ipswich office
and 5 people from the Ipswich office go to work in the Norwich office.

Work out how many people should be working in the Norwich office and how many people should be working in the Ipswich office on Tuesday.

Norwich Office = …………………people

Ipswich Office = ………………….people

**(Total for question = 3 marks)**

**Q4.**

Work out $\dfrac{1}{3} + \dfrac{5}{9}$

.......................................................

**(Total for question = 2 marks)**

**Q5.**

Jeff lives in Bath. He works in an office in London.

Jeff leaves his home in Bath at 07:10. He catches a train in Bath at 07:35

The train takes 1 hour 35 minutes to get to London. It then takes Jeff 40 minutes to get to his office.

At what time does Jeff get to his office?

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**(Total for Question is 3 marks)**

**Q6.**

(a) Write these numbers in order of size. Start with the smallest number.

$$0.401 \qquad 0.46 \qquad 0.37 \qquad 0.439$$

...........................................................

(1)

(b) Write these numbers in order of size. Start with the smallest number.

$$75\% \qquad \frac{7}{8} \qquad 0.25 \qquad \frac{1}{2} \qquad \frac{2}{3}$$

...........................................................

(2)

**(Total for question = 3 marks)**

**Q7.**

(a)  Work out      84 ÷ 3

.........................................................

(1)

(b)  Work out      0.17 × 6000

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(1)

(c)  Work out      $(-2)^3$

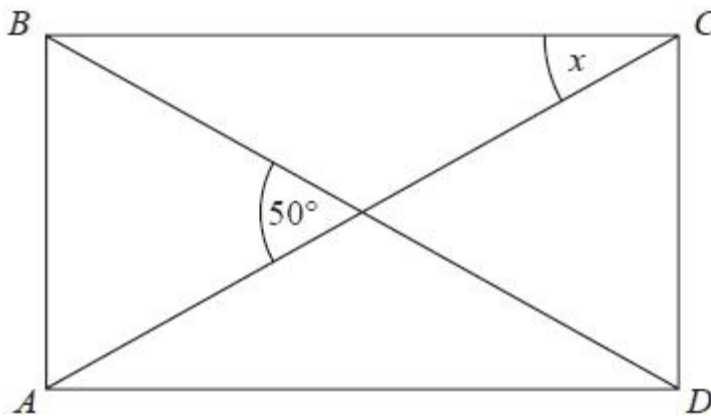.........................................................

(1)

**(Total for question = 3 marks)**

**Q8.**



*ABCD* is a rectangle.
*AC* and *BD* are straight lines.
The angle between *AC* and *BD* is 50°.

Work out the size of the angle marked *x*.

..................................................... °

**(Total for question = 3 marks)**

**Q9.**

Renee buys 5 kg of sweets to sell.
She pays £10 for the sweets.

Renee puts all the sweets into bags.
She puts 250 g of sweets into each bag.
She sells each bag of sweets for 65p.

Renee sells all the bags of sweets.

Work out her percentage profit.

.......................................................... %

**(Total for question = 4 marks)**

**Q10.**

Fran is decorating her bedroom.
She is going to put a border all around the bedroom.
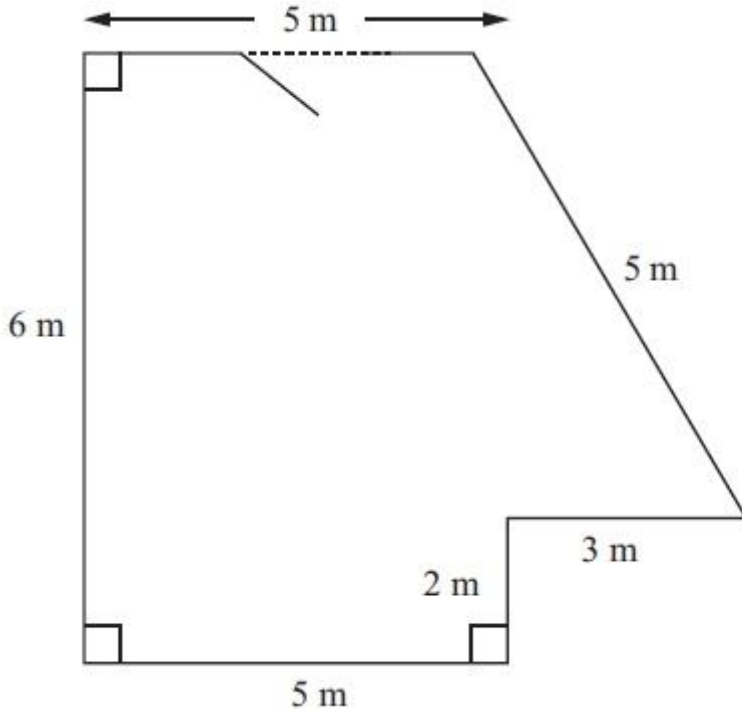
This diagram shows a plan of the bedroom.



Diagram **NOT**
accurately drawn

Border rolls are sold in 4 m lengths.
Work out the number of border rolls Fran will need to buy.

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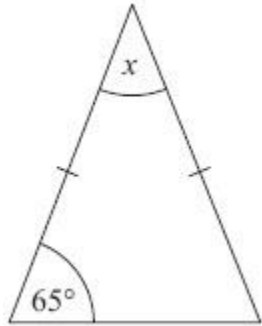
**(Total for Question is 4 marks)**

**Q11.**



Diagram **NOT**
accurately drawn

Work out the size of the angle marked *x*. Give reasons for your answer.

**(Total for Question is 3 marks)**

**Q12.**

Ed has 4 cards. There is a number on each card.

| 12 | | 6 | | 15 | | ? |

The mean of the 4 numbers on Ed's cards is 10

Work out the number on the 4th card.

. . . . . . . . . . . . . . . . . . . . .

**(Total for Question is 3 marks)**

**Q13.**

It would take 120 minutes to fill a swimming pool using water from 5 taps.

(a)  How many minutes will it take to fill the pool if only 3 of the taps are used?

.......................................................... minutes

**(2)**

(b)  State one assumption you made in working out your answer to part (a).

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**(1)**

**(Total for question = 3 marks)**


**Q14.**

Here are the instructions to work out the time, in minutes, needed to cook a chicken.

25 minutes for each $\frac{1}{2}$ kg

then    add 15 minutes

Lawrence is going to cook a chicken. The chicken has a weight of 2 kg.

Lawrence wants to finish cooking the chicken at 6 30 pm.

Work out the time he should start to cook the chicken.

**(Total for question = 4 marks)**

**Q15.**

The table shows the cost of posting large letters.

| Weight range | 0 – 100 g | 101 g – 250 g | 251 g – 500 g | 501 g – 750 g |
|---|---|---|---|---|
| Cost | 60 p | 85 p | £ 1.13 | £ 1.59 |

Sajid posts 8 large letters.
Each letter weighs 50 g.
Sajid pays with a £10 note.

(a)  How much change should Sajid get?

£..........................................................

(3)

Some magazines have to be posted to a shop.

Adam wants to post the magazines as 10 large letters.
Each letter will have a weight of 250 g.

Tina wants to post the magazines as 5 large letters.
Each letter will have a weight of 500 g.

(b)  Who has the cheaper way of posting the magazines?
    You must show all your working.

(3)

**(Total for question = 6 marks)**