www.mathsrevision.com

Foundation Paper 1 2003

Created by Graduate Bsc (Hons) MathsSci (Open) GIMA

1)a. Given 17.9 + 5.2

| 17.9 |
|-------|
| + 5.2 |
| 23.1 |
| 1 |

b. Given 3.21 x 7

$$3.21$$

$$\times 7$$

$$22.47$$

$$1$$

c. 58.4÷10

Simply move point 1 place to the left.

5.84

2. Given 20% of £340

Step 1 : Convert 20% to a fraction $\frac{20}{100} = \frac{1}{5}$

Step 2 : Write £'s to 2 decimal places $\frac{1}{5}$ of £340.00

$$5\overline{)3^{3}4^{4}0.00}$$
 = £68.00 or £68



3. Given the film start at 8.00 to 9.00 and then 9.25 to 11.10 we can work out the time the film last altogether:

Total time is 2 hrs 45mins

- **4.a** Given the speedometer display the speed is (reading from display) 85mph.
- **b**. If a train travels for 3 hours at the speed in part (a) above. Then the distance travelled will be:

Distance = speed \times time

 $\frac{85}{\frac{255}{1}}$ Distance travelled is 255 miles



5.a Given the table of cities and their temperatures:

| Paris | Madrid | Montreal | Moscow | New York |
|-------|--------|----------|--------|----------|
| 4 | 9 | -6 | -2 | 0 |

The city with the lowest temperature is Montreal.

5. b When the temperature drops by 3 degrees in Moscow the new temperature will be:

-2 - 3 = -5 degrees

6. If Colin's gross pay is £1980 and his deductions are £509. Then his net pay will be:

$$19^{7}8^{1}0$$

- 509
£ 1471

7a. Given the rule we can complete the number cells.

| 7 | 11 | 18 | 29 |
|---|----|----|----------|
| | | J | <u>,</u> |
| | | | |

b.

С.



8. Given the table of bills.

| | Amount |
|--------|--------|
| Spring | £68 |
| Summer | £50 |
| Autumn | £73 |
| Winter | |
| Total | £336 |

To calculate the winter bill we add up the Spring, Summer and Autumn bills and take this total away from the total bill.

b. The mean amount for the bills is:

Add up the total for all the bills ± 336

Divide by the number of bills

4)336 The mean bill is £84



1. Given the acrobat picture.

The size of the shaded angle is



180° - 73° = 107°

2. Using the table to complete the bar chart we have:

| Favourite Crisps flavour | Number of people |
|--------------------------|------------------|
| Ready Salted | 12 |
| Cheese & Onion | 9 |
| Beef | 2 |
| Salt & Vinegar | 14 |
| Chicken | 5 |





3. (a) Given the candle holder design diagram we can complete the table by adding on 4 each time.



3. Correction factor, so that the rule works is, add on 2

Full rule is: $S = 3L + 2^{\circ}$

- 4. Given the strips can have the combination of:
 - A round neck or a V-neck
 - Long sleeve or short sleeve
 - A plain body or striped body

5 other possible combinations are: (there are more !)

| Neck | Sleeves | Body | | |
|------|---------|---------|--|--|
| V | Short | Striped | | |
| V | Short | Plain | | |
| V | Long | Striped | | |
| V | Long | Plain | | |
| R | Short | Striped | | |
| R | Short | Plain | | |



5. Enlarging the diagram so it is twice as long we have:



6. Give the plan of the school hall.



- (a) The length of the hall on the plan is 8.6cm.
- (b) Given the scale is 1 cm = 5 m. the actual length of the hall is

$$\frac{x 5}{\frac{43.0}{3}}$$
 length is 43m



6. (c) Measuring breadth on the plan we get: 6 cm

Actual breadth is : $6 \times 5 = 30$ m

Therefore area is:

Area = length \times breadth = 43 \times 30 = 1290 m²

7. Given the jobs list and times we can complete the table as follows:

| | 9 a | m | 10 | am | 11 | am | no | oon 1 | pm | 2 p | m 3 p | m 4 | l pm | 5 p | m |
|-----|-----|-----|----|-----|----|-----|----|-------|------|-----|-------|-------|------|-----|---|
| Sam | | Job | 3 | Job | 3 | Job | 4 | Lunch | Job | 2 | Job 5 | Job 5 | Job | 5 | |
| Jo | | Job | 3 | Job | 3 | Job | 1 | Job 1 | Lunc | h | Job 5 | Job 5 | Job | 5 | |

8. Given the diagram we can work out the volume of the cuboid.

Volume = length \times breadth \times height Volume = 8 \times 6 \times 16 Volume = 768 cm³





- (a) Given that the scales are balanced and there are 6 identical small parcels on one side and a large parcel weighing 1.8 kg on the other.

Each small parcel must weigh:

1.8 kg = 1800g

 $\frac{300}{6)1^{1}800}$ each parcel is 300g or 0.3kg



From the first diagram, since scales are balanced then parcel C must be the heaviest.

From the second diagram, see can see that parcel A is lower than parcel B therefore parcel A is heavier than parcel B.

Heaviest parcel C. Next parcel B. Lightest parcel A.



10. Given there is ± 394 in the bank and the interest is 7% per year. Then in one year she will receive in interest:

$$\frac{7}{100}$$
 × £394 = £27.58

OR

1% of £394 = £394 ÷100 = £3.94 7% of £394 = 7 x £3.94 = £27.58

11. Given the table:

| Daytime Rate 8am-6pm Mon-Fri | 3.5p per minute |
|------------------------------|-----------------|
| Cheap Rate (all other times) | 1p per minute |

(a) The cost between 4.30pm and 5.30pm is:
 Difference in time is 1 hour
 1 hour = 60 mins

Total cost =
$$3.5p \times 60$$

= $3.5 \times 10 \times 6$
= 35×6
 $\frac{35}{\frac{\times 6}{\frac{210}{3}}}$ equals 210p or £2.10



11. (b) Given the Gold Card cost \pounds 14.99 for unlimited use.

Cost of 30 hours at cheap rate is:

30 hours = 30 x 60 = 1800 minutes

Cost of 1800 minutes at 1p is 1800p or £18.00

Jamie saved £18.00 - £14.99 = £3.01 using the Gold Card

12. Given Freshdent usually contains 240ml.

If it contains a $\frac{1}{3}$ extra it will contain:

13. Given the rule:

Cost = £25 + (number of days \times £14.50)

(a) Cost of hiring a car for 6 days will be: $\frac{\times 6}{\frac{87.00}{23}}$ £25 + £87= £112



13. (b) Given he has £300 to spend on car hire, then he will be able hire it for:
 £300 - £25 =£275 £275 ÷ 14.50 = 18.96

He will be able to hire car for 18 days