Name:	Teacher Assessment		Topic 12 - F Ratio

Section A   Sharing Amounts in a Given Ratio   Grade D / C

1. Divide £60 in the ratio 1:5

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Answer £ ……………………. and £ ……………………

(Total 2 marks)

2. Divide £438 in the ratio 5:1

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Answer £ .... and £ ....

(Total 2 marks)

3. A packet contains 24 fibre-tipped pens.

Henry and Alice share them in the ratio 3 : 5

How many does Alice receive?

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Answer ....……………………………

(Total 2 marks)

4. The town of Axon has 35 600 houses.
The ratio of detached houses to other types of houses is 1: 4
How many detached houses are there?

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Answer ………………………………………

(Total 2 marks)

5. Bob and Mary win £250 on the Premium Bonds.
They share the money in the ratio 1 : 4

    (a) How much money does each person receive?

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Answer Bob £ .... , Mary £ ....

(2)

    (b) What percentage of the £250 does Mary receive?

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Answer .... %

(2)
(Total 4 marks)

6. Alex and Ben share £520 in the ratio 1: 3

    (a) How much does Ben receive?

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Answer £ ....

(2)

    (b) What percentage of the £520 does Ben receive?

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Answer .... %

(2)
(Total 4 marks)

7. Divide £8000 in the ratio 5 : 3 : 2

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Answer £ …………… £ ……………… £ ………………

(Total 3 marks)

8. Brass is made from the metals copper, zinc and tin in the ratio 7 : 3 : 2

How much copper is needed to make 60 kg of brass?

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Answer .... kg

(Total 2 marks)

9. Mrs Jones inherits £12 000. She divides the £12 000 between her three children Laura, Mark
and Nancy in the ratio 7 : 8 : 9, respectively. How much does Laura receive?

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Answer £ ....

(Total 2 marks)

10. Three musicians received £100 between them for playing in a concert.

They divided their pay in the ratio of the number of minutes for which each played.

Angela played for 8 minutes, Fran played for 14 minutes and Dan played for 18 minutes.

How much did each receive?

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…………………………………………………………………………………………………

Answer   Angela received £ ....………………

Fran received £ ....……………………………

Dan received £ ......……………………...……………

(Total 3 marks)

11. Two singers receive £80 between them.

They divide their pay in the ratio of the number of songs they each sing.

Dan sings one song and Angela sings four songs.

How much does Dan receive?

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Answer £ ....

(Total 2 marks)

12. Amy, Beth and Chloe share a £5000 lottery win in the ratio 11: 8: 6
How much does each of them receive?

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Answer Amy £ ……………… , Beth £ .... , Chloe £ ……………….

(Total 3 marks)

13. The sizes of the interior angles of a quadrilateral are in the ratio

3 : 4 : 6 : 7

Calculate the size of the largest angle.

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Answer ....

(Total 3 marks)

Success:	Target:

Teacher
Assessment

| Section B | Problem Solving Using Ratio | Grade D / C |

1. The table shows the amounts of tomatoes, onions and water needed to make tomato sauce for 4 people.

Fill in the amounts needed to make tomato sauce for 10 people.

	4 people	**10 people**
Tomatoes	200 g	...........g
Onions	2	5
Water	50 ml	...........ml

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(Total 2 marks)

2. The table shows the amounts needed to make 36 mince pies.

Ingredient	**Amount for 36 pies**	**Amount for 48 pies**
Plain Flour	330 g	
Lard	75 g	
Butter	75 g	
Mincemeat	720 g	

Calculate the amounts needed to make 48 mince pies.
Put your answers in the table.

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(Total 3 marks)

3. A map has a scale of 1:5000
On the map, the length of a sports field is 3 cm.

What is the actual length of the sports field?
Give your answer in metres.

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Answer ……………………………………… m

(Total 3 marks)

4. A pile of 20 sheets of card is 1 cm high. How high is a pile of 50 sheets of card?

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Answer ....

(Total 2 marks)

5. The cost of 30 bottles of water is £21.
What is the cost of 45 bottles of water?

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Answer ....

(Total 3 marks)

6. A short necklace has 32 gold beads and 8 black beads.
A long necklace has a total of 60 beads.
Both necklaces have the same ratio of gold beads to black beads.

How many black beads are on the long necklace?

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Answer...

(Total 3 marks)

7.   On one day Sara sold chocolate ice creams and vanilla ice creams in the ratio 3 : 5
      She sold a total of 72 ice creams.

      How many more vanilla ice creams than chocolate ice creams did she sell?

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                              Answer ....

                                                                      (Total 3 marks)

8.   The ratio of girls to boys in a school is 13:12
      There are 572 girls in the school.

      (a)   How many pupils are there in the school altogether?

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                              Answer ....

                                                                                    (3)

      (b)   Harry is a Year 10 pupil at the school.
             He says that the ratio of girls to boys in Year 10 will also be 13:12

             Explain why Harry may **not** be correct to say this.

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                                                                                    (1)
                                                                      (Total 4 marks)

9. 'Soft pink' paint is made by mixing red and white paint in the ratio 2 : 3

(a) Which of these mixes will make 'soft pink' paint?
Write 'yes' or 'no' in the last column of the table.

Mix	Amount of red paint (litres)	Amount of white paint (litres)	'Soft pink' yes or no
A	2	3	yes
B	1	2	
C	3	2	
D	4	5	
E	1	$1\frac{1}{2}$	
F	6	8	
G	4	6	

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(3)

(b) Sam mixed 20 litres of red paint with 35 litres of white paint.

Did he make 'soft pink' paint?
Explain your answer.

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(1)
(Total 4 marks)

10. A necklace is made from red beads and black beads.
45% of the beads are red.

(a) What percentage of the beads is black?

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Answer ………………………………………………… %

(1)

(b) What is the ratio of red beads to black beads?
Give your answer in its simplest form.

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Answer ………………………………………………….

(2)

(c)   There are 18 red beads on the necklace.
      How many black beads are on the necklace?

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Answer ……………………………………………………….

(2)
(Total 5 marks)

11.   (a)   In a primary school the ratio of boys to girls is 7 : 8

For each statement write down whether it is

D   Definitely true
C   Could be true
F   False

(i)   The number of boys in the school is 49   ....

(ii)   The fraction of boys in the school is $\dfrac{7}{8}$ ....

(iii)   The fraction of girls in the school is $\dfrac{8}{15}$ ....

(3)

(b)   In a secondary school the ratio of boys to girls is 10 : 11
      There are 830 boys in the school.
      How many girls are there in the school?

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Answer ....

(2)
(Total 5 marks)

Success:	Target:
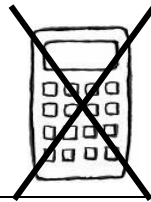
Section C	Best Buys	Grade D / C

1. Raspberry jam is sold in two sizes.

Large 500 g

Standard 250 g
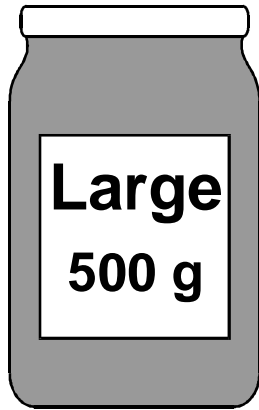
£2.69

£1.39

Which size is the better value for money? You **must** show all your working.

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Answer ....

(Total 2 marks)

2. Packets of chocolate biscuits are sold in two sizes.

Standard Packet
Contents 12 biscuits

Large Packet
Contents 36 biscuits
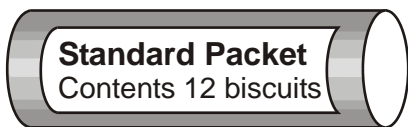
£1.09

£3.17

Which size is the better value for money?

You **must** show your working.

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Answer ....

(Total 2 marks)

3. Packets of fish fingers are sold in two sizes.

Standard Packet
Contents 12 Fish Fingers

Economy Packet
Contents 36 Fish Fingers

£1.42   £4.74
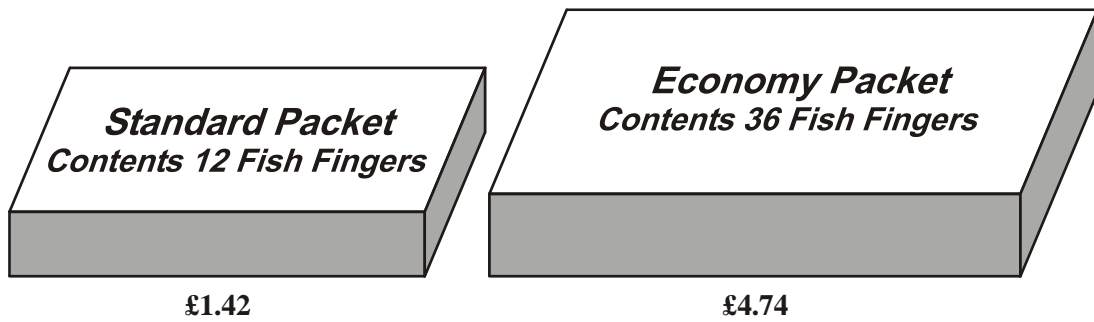
Which size packet is the better value for money? You **must** show all your working.

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Answer ....

(Total 2 marks)

4. The same type of crystal glasses is sold in two different packs.

Small pack

**Contents
4 glasses**

£3.20

Large pack

**Contents
12 glasses**

£10.20

Which size is the better value for money?

You **must** show your working.

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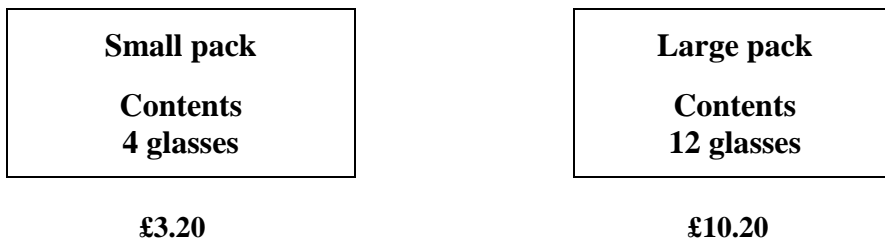
Answer …………………………………........

(Total 2 marks)

5. Mineral water is sold in two sizes.
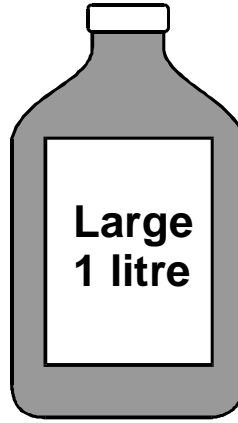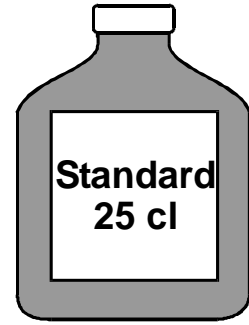
**Large
1 litre**

**Standard
25 cl**

Which size is the better value for money?
You **must** show all your working.

£1.49

59p

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Answer ....

(Total 2 marks)

6. A supermarket sells boxes of the same brand of teabags in three different sizes.

Small

40 Teabags
72p

Medium

100 Teabags
£2.00

Large
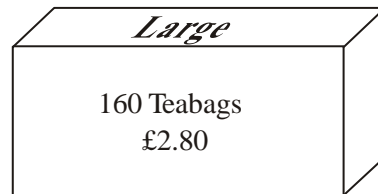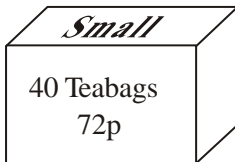
160 Teabags
£2.80

Work out the cost of 20 teabags for each size.

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Answer   Small …………… p   Medium …………… p   Large …………… p

(Total 4 marks)

Success:

Target: