



EP.M97 Multiplying and Dividing Fractions in Context

GL ASSESSMENT GL-11PLUS-MATHS · Calculators not allowed · about 55 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** Work out $\frac{2}{3}$ of 9.

(Total for Question 1 is 1 mark)

- 2** Calculate $\frac{3}{4} \times \frac{2}{5}$.

- ☐ A) $\frac{3}{20}$
☐ B) $\frac{3}{10}$
☐ C) $\frac{5}{8}$
☐ D) $\frac{1}{2}$
☐ E) $\frac{9}{20}$

(Total for Question 2 is 1 mark)

- 3** A cake recipe uses $1\frac{1}{2}$ cups of sugar. You make $\frac{2}{3}$ of the recipe. Work out how much sugar you need.

(Total for Question 3 is 2 marks)

- 4** A wooden board is 2.4 m long. You need $\frac{5}{8}$ of its length for a shelf. Calculate the length of the shelf.

(Total for Question 4 is 2 marks)

5 A pizza is cut into 8 equal slices. Sophie eats $\frac{3}{4}$ of the pizza. How many slices does she eat?

- ☐ A) 5
- ☐ B) 4
- ☐ C) 6
- ☐ D) 7
- ☐ E) 3

(Total for Question 5 is 1 mark)

6 Emma paints $\frac{2}{5}$ of a fence. She then paints $\frac{3}{7}$ of the remaining unpainted part.

(a) What fraction of the whole fence does she paint in the second stage? (1)

.....
(b) What fraction of the fence is now painted in total? (1)

.....
(Total for Question 6 is 2 marks)

7 A bag contains $2\frac{1}{2}$ kg of flour. A baker uses $\frac{3}{4}$ of the bag for a batch. How much flour does the baker use?

(Total for Question 7 is 2 marks)

8 What is $\frac{4}{9}$ of 63?

- ☐ A) 27
- ☐ B) 28
- ☐ C) 24
- ☐ D) 36
- ☐ E) 32

(Total for Question 8 is 1 mark)

9 A ribbon 3 m long is cut into pieces each $\frac{2}{3}$ m long.

(a) How many full pieces of length $\frac{2}{3}$ m can be cut from the ribbon? **(1)**

(b) How much ribbon is left over? **(1)**

(Total for Question 9 is 2 marks)

10 A jar contains $\frac{7}{8}$ litre of juice. Tom drinks $\frac{3}{5}$ of the juice. He then pours the remaining juice equally into 4 glasses. Work out the volume in each glass.

(Total for Question 10 is 3 marks)

11 A tall jug contains $1\frac{3}{4}$ litres of squash. You pour $\frac{2}{3}$ of the jug into a bowl. How much squash, in litres, is in the bowl?

(Total for Question 11 is 2 marks)

12 A gardener has $3\frac{1}{2}$ kg of compost. He uses $\frac{2}{5}$ of it on one bed and then shares the remainder equally between 3 pots. Work out how much compost each pot receives.

(Total for Question 12 is 3 marks)

13 A crate contains $4\frac{1}{2}$ litres of syrup. The syrup is bottled into small bottles of $\frac{3}{10}$ litre. How many full bottles can be filled?

(Total for Question 13 is 2 marks)

- 14** A chef mixes $\frac{3}{5}$ of a $2\frac{1}{2}$ kg bag of flour with $\frac{1}{3}$ of a $1\frac{3}{4}$ kg bag of flour to make a blend. Work out the total mass of the blend. Give your answer as an improper fraction and as a mixed number.

(Total for Question 14 is 4 marks)

- 15** A baker has $2\frac{3}{4}$ kg of dough. He uses $\frac{5}{6}$ of it to make loaves. He then divides the remaining dough equally into 3 rolls. Work out the mass of dough in each roll, in kilograms.

(Total for Question 15 is 3 marks)

- 16** A paint can contains 6 litres. $\frac{2}{3}$ of the paint is used on the walls. Then $\frac{3}{5}$ of the remaining paint is used on the doors. The rest is poured into small tins each holding $\frac{1}{8}$ litre. How many full tins are filled and how much paint is left over (give the leftover as a fraction of a litre)?

(Total for Question 16 is 5 marks)

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Question 1

- **B1** 6 cao
- **Answer: 6**

Question 2

- **B1** correct option B ($\frac{3}{10}$) cao
- **Answer: B) $\frac{3}{10}$** ($\frac{3}{4} \times \frac{2}{5} = \frac{6}{20} = \frac{3}{10}$).

Question 3

- **M1** $\frac{3}{2} \times \frac{2}{3}$ or $1 \frac{1}{2} \times \frac{2}{3}$ seen (method)
- **A1** 1 cup cao
- **Answer: 1 cup**

Question 4

- **M1** $2.4 \times \frac{5}{8}$ or equivalent method seen
- **A1** 1.5 m cao
- **Answer: 1.5 m**

Question 5

- **B1** correct option C (6 slices) cao
- **Answer: C) 6 slices**

Question 6

- (a) **B1** $\frac{9}{35}$ cao
- (a) **Answer: $\frac{9}{35}$**
- (b) **B1** $\frac{23}{35}$ cao
- (b) **Answer: $\frac{23}{35}$**

Question 7

- **M1** $\frac{5}{2} \times \frac{3}{4}$ or equivalent method seen
- **A1** $1 \frac{7}{8}$ kg cao
- **Answer: $1 \frac{7}{8}$ kg**

Question 8

- **B1** correct option B (28) cao
- **Answer: B) 28**

Question 9

- (a) **B1** 4 cao
- (a) **Answer: 4 pieces**
- (b) **B1** $\frac{1}{3}$ m cao
- (b) **Answer: $\frac{1}{3}$ m**

Question 10

- **M1** Find remaining fraction $1 - \frac{3}{5} = \frac{2}{5}$ and apply to $\frac{7}{8}$ (method)
- **M1** Division of remaining amount by 4 seen (or multiply by $\frac{1}{4}$)
- **A1** $\frac{7}{80}$ litre cao
- **Answer: $\frac{7}{80}$ litre (each)**

Question 11

- **M1** $7/4 \times 2/3$ or $1\ 3/4 \times 2/3$ seen (method)
- **A1** $1\ 1/6$ litres cao
- **Answer: $1\ 1/6$ litres**

Question 12

- **M1** Find amount used: $7/2 \times 2/5$ or equivalent (method)
- **M1** Find remainder: $7/2 - 7/5$ or equivalent ft
- **A1** $7/10$ kg cao
- **Answer: $7/10$ kg**

Question 13

- **M1** $9/2 \div 3/10$ or equivalent division method seen
- **A1** 15 cao
- **Answer: 15 bottles**

Question 14

- **M1** $3/5$ of $5/2$ seen = $3/5 \times 5/2$ (= $3/2$) (method)
- **M1** $1/3$ of $7/4$ seen = $1/3 \times 7/4$ (= $7/12$) (method)
- **A1** $25/12$ as an improper fraction cao
- **A1** $2\ 1/12$ as mixed number cao
- **Answer: $25/12$ (improper), $2\ 1/12$ (mixed number)**

Question 15

- **M1** Find amount used: $11/4 \times 5/6$ or equivalent (method)
- **M1** Find remainder: $11/4 - 55/24 = 11/24$ seen (method)
- **A1** $11/72$ kg cao
- **Answer: $11/72$ kg**

Question 16

- **M1** Find paint used on walls: $6 \times 2/3 = 4$ L seen
- **M1** Find paint used on doors: remainder 2 L then $3/5$ of 2 = $6/5$ (= 1.2 L) seen
- **M1** Find remaining paint after doors: $2 - 6/5 = 4/5$ L seen
- **M1** Divide remaining by $1/8$ (or multiply by 8) to find number of tins seen
- **A1** 6 full tins and $1/20$ L left over cao
- **Answer: 6 full tins and $1/20$ litre left over**