Fractions of Amounts - Worksheet

Skill

Group A - Unit fraction

Work out:

1) $\frac{1}{2}$ of 60

2) $\frac{1}{3}$ of 60

3) $\frac{1}{4}$ of 60

4) $\frac{1}{2}$ of 150

5) $\frac{1}{5}$ of 150

6) $\frac{1}{3}$ of 150

7) $\frac{1}{2}$ of 180

8) $\frac{1}{3}$ of 180

9) $\frac{1}{10}$ of 180

10) $\frac{1}{2}$ of 200

11) $\frac{1}{5}$ of 200

12) $\frac{1}{10}$ of 200

Group B - Non-unit fraction

Work out:

1) $\frac{1}{5}$ of 35

2) $\frac{2}{5}$ of 35

3) $\frac{4}{5}$ of 35

4) $\frac{1}{7}$ of 70

5) $\frac{3}{7}$ of 70

6) $\frac{5}{7}$ of 70

7) $\frac{1}{8}$ of 160

8) $\frac{5}{8}$ of 160

9) $\frac{7}{8}$ of 160

10) $\frac{1}{10}$ of 120

11) $\frac{3}{10}$ of 120

12) $\frac{7}{10}$ of 120

Fractions of Amounts - Worksheet

Group C - Calculator allowed

Work out:

1) $\frac{1}{3}$ of $24.9\ km$

2) $\frac{2}{3}$ of $24.9\ km$

3) $\frac{1}{5}$ of $24.9\ kg$

4) $\frac{3}{5}$ of $24.9\ kg$

5) $\frac{1}{3}$ of £22.80

6) $\frac{2}{3}$ of £22.80

7) $\frac{1}{4}$ of $25.6\ km$

8) $\frac{3}{4}$ of $25.6\ km$

9) $\frac{1}{6}$ of $36.6\ kg$

10) $\frac{5}{6}$ of $36.6\ kg$

11) $\frac{1}{5}$ of £46.50

12) $\frac{2}{5}$ of £46.50

Fractions of Amounts - Worksheet

Applied

1) **(a)** A college has 420 students. $\frac{3}{5}$ of the students are studying Science. How many students are studying Science?

(b) A school has 224 pupils in Year 11. $\frac{2}{7}$ of the pupils are studying Spanish. How many of the pupils are studying Spanish?

2) **(a)** $\frac{3}{4}$ of a number is 24. What is the number?

(b) $\frac{4}{9}$ of a number is 32. What is the number?

3) **(a)** A barrel can hold 80 litres of water. Water is poured into the barrel until it is $\frac{5}{8}$ full. How much water is there in the barrel?

(b) A water bottle holds $750\ ml$ of water. Water is poured into the bottle until it is $\frac{3}{4}$ full. How much water is in the bottle?

4) **(a)** A coat normally costs £39. In the sale it is reduced by $\frac{1}{3}$. What is the new price of the coat?

(b) A pair of boots normally costs £48. In the sale they are reduced by $\frac{1}{4}$. What is the new price of the pair of boots?

Fractions of Amounts - Exam Questions

1) The average age of people in an office is 42 years old.

Ben's age is $\frac{5}{7}$ of the average. How old is Ben?

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(2 marks)

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2) There are 268 coins in a bottle. $\frac{1}{4}$ of the coins are £1 coins. 86 of the coins are $50p$ coins. The rest of the coins are £2 coins.
Work out the value of the 268 coins.

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(4 marks)

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3) A train has 1 first-class carriage and 5 standard carriages.

The first-class carriage has 50 seats.
$\frac{2}{5}$ of the seats are being used.

Each standard class carriage has 50 seats.
$\frac{5}{8}$ of the seats are being used.

Are more than half the seats on the train being used? You must show your working.

.....
(5 marks)

Fractions of Amounts - Answers

	Question	Answer
	Skill Questions	
Group A	Work out: **1)** $\frac{1}{2}$ of 60 **2)** $\frac{1}{3}$ of 60 **3)** $\frac{1}{4}$ of 60 **4)** $\frac{1}{2}$ of 150 **5)** $\frac{1}{5}$ of 150 **6)** $\frac{1}{3}$ of 150 **7)** $\frac{1}{2}$ of 180 **8)** $\frac{1}{3}$ of 180 **9)** $\frac{1}{10}$ of 180 **10)** $\frac{1}{2}$ of 200 **11)** $\frac{1}{5}$ of 200 **12)** $\frac{1}{10}$ of 200	**1)** 30 **2)** 20 **3)** 15 **4)** 75 **5)** 30 **6)** 50 **7)** 90 **8)** 60 **9)** 18 **10)** 100 **11)** 40 **12)** 20
Group B	Work out: **1)** $\frac{1}{5}$ of 35 **2)** $\frac{2}{5}$ of 35 **3)** $\frac{4}{5}$ of 35 **4)** $\frac{1}{7}$ of 70 **5)** $\frac{3}{7}$ of 70	**1)** 7 **2)** 14 **3)** 28 **4)** 10 **5)** 30

Fractions of Amounts - Answers

Group B	**6)** $\frac{5}{7}$ of 70 **7)** $\frac{1}{8}$ of 160 **8)** $\frac{5}{8}$ of 160 **9)** $\frac{7}{8}$ of 160 **10)** $\frac{1}{10}$ of 120 **11)** $\frac{3}{10}$ of 120 **12)** $\frac{7}{10}$ of 120	**6)** 50 **7)** 20 **8)** 100 **9)** 140 **10)** 12 **11)** 36 **12)** 84
Group C	Work out: **1)** $\frac{1}{3}$ of $24.9\ km$ **2)** $\frac{2}{3}$ of $24.9\ km$ **3)** $\frac{1}{5}$ of $24.9\ kg$ **4)** $\frac{3}{5}$ of $24.9\ kg$ **5)** $\frac{1}{3}$ of £22.80 **6)** $\frac{2}{3}$ of £22.80 **7)** $\frac{1}{4}$ of $25.6\ km$ **8)** $\frac{3}{4}$ of $25.6\ km$ **9)** $\frac{1}{6}$ of $36.6\ kg$ **10)** $\frac{5}{6}$ of $36.6\ kg$ **11)** $\frac{1}{5}$ of £46.50 **12)** $\frac{2}{5}$ of £46.50	**1)** $8.3\ km$ **2)** $16.6\ km$ **3)** 4.98 **4)** 14.94 **5)** £7.60 **6)** £15.20 **7)** $6.4\ km$ **8)** $19.2\ km$ **9)** $6.1\ kg$ **10)** $30.5\ kg$ **11)** £9.30 **12)** £18.60

Fractions of Amounts - Answers

	Question	Answer
	Applied Questions	
1)	**(a)** A college has 420 students. $\frac{3}{5}$ of the students are studying Science. How many students are studying Science?	**(a)** 252 students
	(b) A school has 224 pupils in Year 11. $\frac{2}{7}$ of the pupils are studying Spanish. How many of the pupils are studying Spanish?	**(b)** 64 pupils
2)	**(a)** $\frac{3}{4}$ of a number is 24. What is the number?	**(a)** 32
	(b) $\frac{4}{9}$ of a number is 32. What is the number?	**(b)** 72
3)	**(a)** A barrel can hold 80 litres of water. Water is poured into the barrel until it is $\frac{5}{8}$ full. How much water is there in the barrel?	**(a)** 50 litres
	(b) A water bottle holds 750 ml of water. Water is poured into the bottle until it is $\frac{3}{4}$ full. How much water is in the bottle?	**(b)** 562.5 ml
4)	**(a)** A coat normally costs £39. In the sale it is reduced by $\frac{1}{3}$. What is the new price of the coat?	**(a)** £26
	(b) A pair of boots normally costs £48. In the sale they are reduced by $\frac{1}{4}$. What is the new price of the pair of boots?	**(b)** £36

Fractions of Amounts - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	The average age of people in an office is 42 years old. Ben's age is $\frac{5}{7}$ of the average. How old is Ben?	$\frac{5}{7} \times 42$ **(1)** $= 30$ **(1)**	**(2)**
2)	There are 268 coins in a bottle. $\frac{1}{4}$ of the coins are £1 coins. 86 of the coins are 50p coins. The rest of the coins are £2 coins. Work out the value of the 268 coins.	$\frac{1}{4} \times 268 = 67$ so £67 **OR** $86 \times 0.5 = 43$ so £43 **(1)** $268 - 67 - 86 = 115$, so £230 **(1)** £67 + £43 + £230 **(1)** £340**(1)**	**(4)**
3)	A train has 1 first-class carriage and 5standard carriages. The first-class carriage has 50 seats. $\frac{2}{5}$ of the seats are being used. Each standard class carriage has 50 seats. $\frac{5}{8}$ of the seats are being used. Are more than half the seats on the train being used? You must show your working.	$50 + (5 \times 80) = 450$ **(1)** $450 \div 2 = 225$ **(1)** $\frac{2}{5} \times 50 = 20$ **(1)** $\frac{5}{8} \times 80 = 50$ **(1)** $20 + (5 \times 50) = 270$ Yes and 270 and 225 **(1)**	**(5)**