

Contents of Sample Version: Problem Solving Solved

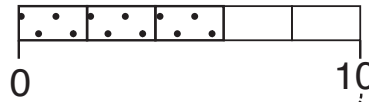
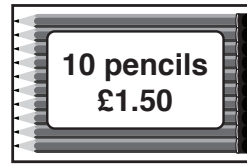
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16.5 Fractions and profit introduction 1




Sample Resource ©Toticity Limited

- 1a** Damien buys a pack of 10 pencils for £1.50
 Damien sells $\frac{3}{5}$ of the 10 pencils he bought.
 He sells each of these pencils for 20p.
 Calculate how much money he receives.



$\square \div 5 = \square \times 3 = \square$
 $\square \times 20 = \square \text{ p}$




- 1b** How many pencils does Damien have remaining?

$10 - \square = \square$ pencils remaining

- 1c** Damien sells each of the remaining pencils for 10p each.
 Calculate how much money he receives.

$\square \times 10 = \square \text{ p}$



- 1d** Calculate the total amount of money Damien receives.

$\square + \square = \square \text{ p}$
 money from 20p pencils money from 10p pencils

- 1e** Calculate the profit that Damien makes.

$\square - 150 = \square \text{ p}$

16.5 Fractions and profit introduction 2

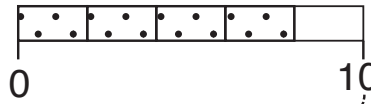
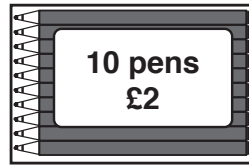


Sample Resource ©Tocity Limited

1a Damien buys a pack of 10 pens for £2

Damien sells $\frac{4}{5}$ of the 10 pens he bought.

He sells each of these pens for 40p.
Calculate how much money he receives.



$$\square \times 40 = \square \text{ p}$$



1b How many pens does Damien have remaining?

$$10 - \square = \square \text{ pens remaining}$$

1c Damien sells each of the remaining pens for 20p each.
Calculate how much money he receives.

$$\square \times 20 = \square \text{ p}$$



1d Calculate the total amount of money Damien receives.

$$\square + \square = \square \text{ p}$$

money from 40p pens
money from 20p pens

1e Calculate the profit that Damien makes.

$$\square - 200 = \square \text{ p } \pounds \square$$

16.5 Fractions and profit introduction: Test



Sample Resource ©Toticity Limited

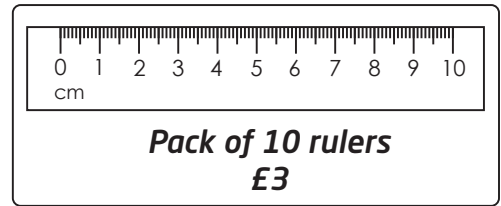
1 Damien buys a pack of 10 rulers for £3.

Damien sells $\frac{2}{5}$ of the 10 rulers he bought.

He sells each of these rulers for 50p.

He sells the remaining rulers for 40p each.

Calculate the total profit he makes.



Answer _____

16.5 Fractions and profit introduction: Answers



Sample Resource ©Toticity Limited

16.5 Fractions and profit introduction 1

1a $10 \div 5 = 2$, $2 \times 3 = 6$, $6 \times 20p = 120p$

1b $10 - 6 = 4$ pencils remaining

1c $4 \times 10p = 40p$

1d $120p + 40p = 160p$

1e $160p - 150p = 10p$ profit

16.5 Fractions and profit introduction 2

1a $10 \div 5 = 2$, $2 \times 4 = 8$, $8 \times 40p = 320p$

1b $10 - 8 = 2$ pens remaining

1c $2 \times 20p = 40p$

1d $320p + 40p = 360p$

1e $360p - 200p = 160p \rightarrow \text{£}1.60$ profit

16.5 Fractions and profit introduction: Test

1 rulers sold for 50p each:

$10 \div 5 = 2$, $2 \times 2 = 4$ rulers

$4 \times 50p = 200p$

remaining rulers sold for 40p each:

$10 - 4 = 6$ rulers

$6 \times 40p = 240p$

total money received:

$200p + 240p = 440p$

Profit:

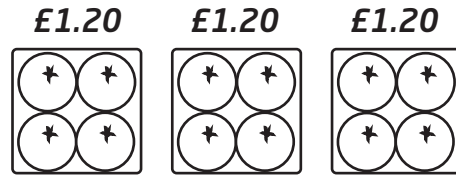
$440p - 300p = 140p \rightarrow \text{£}1.40$ profit

16.6 Fractions and profit next steps 1



Sample Resource ©Toticity Limited

- 1** Andrew buys 3 bags of oranges.
There are 4 oranges in each bag.
Each bag of oranges costs £1.20



- 1a** How much in total did Andrew pay?

$$\square \times \square = \text{£} \square$$

- 1b** How many oranges did Andrew buy?

$$\square \times \square = \square$$

- 1c** Andrew sells $\frac{5}{6}$ of the oranges.

$$\square \div 6 \rightarrow \square \times 5 \rightarrow \square$$

He sells each of these oranges for 60p.
Calculate how much money he receives.

$$\square \times 60 = \square \text{ p}$$

- 1d** How many oranges does Andrew have remaining?

$$\square - \square = \square$$

- 1e** Andrew sells the remaining oranges for 50p each.
Calculate how much money he receives.

$$\square \times 50 = \square \text{ p}$$

- 1f** Calculate the total amount of money Andrew receives.

$$\square + \square = \square \text{ p}$$

money from 60p oranges money from 50p oranges

- 1g** Calculate the profit that Andrew makes.

$$\square - \square = \square \text{ p}$$

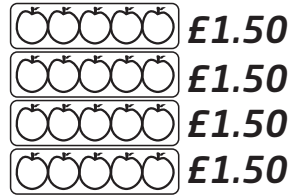
total Andrew paid for oranges £ \square

16.6 Fractions and profit next steps 2



Sample Resource ©Toticity Limited

- 1** Andrew buys 4 bags of apples.
 There are 5 apples in each bag.
 Each bag of apples costs £1.50



- 1a** How much in total did Andrew pay?

$$\square \times \square = \text{£} \square$$

- 1b** How many apples did Andrew buy?

$$\square \times \square = \square$$

- 1c** Andrew sells $\frac{4}{5}$ of the apples.



He sells each of these apples for 50p.
 Calculate how much money he receives.

$$\square \times 50 = \square \text{ p}$$

- 1d** How many apples does Andrew have remaining?

$$\square - \square = \square$$

- 1e** Andrew sells the remaining apples for 40p each.
 Calculate how much money he receives.

$$\square \times 40 = \square \text{ p}$$

- 1f** Calculate the total amount of money Andrew receives.

$$\square + \square = \square \text{ p}$$

money from 50p apples money from 40p apples

- 1g** Calculate the profit that Andrew makes.

$$\square - \square = \square \text{ p}$$

total Andrew paid for apples £ \square

16.6 Fractions and profit next steps: Test



Sample Resource ©Toticity Limited

1 Andrew buys 6 boxes of pears.
There are 5 pears in each box.
Each box of pears costs £2

Andrew sells $\frac{3}{5}$ of the pears he bought.

He sells each of these pears for 60p.
He sells each of the remaining pears for 30p each.
Calculate the total profit he makes.



Answer _____

16.6 Fractions and profit next steps: Answers



Sample Resource ©Toticity Limited

16.6 Fractions and profit next steps 1

- 1a** $\text{£}1.20 \times 3 = \text{£}3.60$ in total
1b $3 \times 4 = 12$ oranges
1c $12 \div 6 = 2$, $2 \times 5 = 10$, $10 \times 60\text{p} = 600\text{p}$
1d $12 - 10 = 2$ oranges remaining
1e $2 \times 50\text{p} = 100\text{p}$
1f $100\text{p} + 600\text{p} = 700\text{p}$
1g $700\text{p} - 360\text{p} = 340\text{p} \rightarrow \text{£}3.40$ profit

16.6 Fractions and profit next steps 2

- 1a** $\text{£}1.50 \times 4 = \text{£}6$ in total
1b $4 \times 5 = 20$ apples
1c $20 \div 5 = 4$, $4 \times 4 = 16$, $16 \times 50\text{p} = 800\text{p}$
1d $20 - 16 = 4$ apples remaining
1e $4 \times 40\text{p} = 160\text{p}$
1f $800\text{p} + 160\text{p} = 960\text{p}$
1g $960\text{p} - 600\text{p} = 360\text{p} \rightarrow \text{£}3.60$ profit

16.6 Fractions and profit next steps: Test

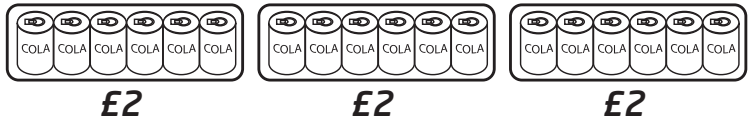
- 1 money paid in total:**
 $\text{£}2 \times 6 = \text{£}12$ in total
- total number of pears:**
 $6 \times 5 = 30$ pears
- pears sold for 60p each:**
 $30 \div 5 = 6$, $6 \times 3 = 18$ pears
 $18 \times 60\text{p} = 1080\text{p}$
- remaining pears sold for 30p each:**
 $30 - 18 = 12$ pears
 $12 \times 30\text{p} = 360\text{p}$
- total money received:**
 $360\text{p} + 1080\text{p} = 1440\text{p}$
- Profit:**
 $1440\text{p} - 1200\text{p} = 240\text{p} \rightarrow \text{£}2.40$ profit

16.7 Fractions and profit advanced 1



Sample Resource ©Toticity Limited

- 1** Saffron buys 3 packs of cola.
There are 6 cans in each pack.
Each pack of cola costs £2



- 1a** How much in total did Saffron pay?

$$\square \times \square = \text{£} \square$$

- 1b** How many cans did Saffron buy?

$$\square \times \square = \square$$

- 1c** Saffron sells $\frac{5}{9}$ of the cans.

$$\square \div 9 \rightarrow \square \times 5 \rightarrow \square$$

She sells each of these cans for 80p.
Calculate how much money she receives.

$$\square \times 80 = \square \text{ p}$$

- 1d** How many cans does Saffron have remaining?

$$\square - \square = \square$$

- 1e** Saffron sells the remaining cans at 2 for 50p.
Calculate how much money she receives.

$$(\square \div 2) \times 50 = \square \text{ p}$$

- 1f** Calculate the total amount of money Saffron receives.

$$\square + \square = \square \text{ p}$$

money from 80p cans money from 2 for 50p cans

- 1g** Calculate the profit that Saffron makes.

$$\square - \square = \square \text{ p}$$

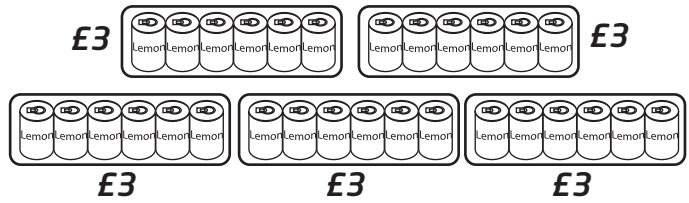
total Saffron paid for cans of cola £ \square

16.7 Fractions and profit advanced 2



Sample Resource ©Toticity Limited

- 1** Saffron buys 5 packs of lemonade.
There are 6 cans in each pack.
Each pack of lemonade costs £3



- 1a** How much in total did Saffron pay?

$$\square \times \square = \text{£} \square$$

- 1b** How many cans did Saffron buy?

$$\square \times \square = \square$$

- 1c** Saffron sells $\frac{4}{5}$ of the cans.

$$\square \div 5 \rightarrow \square \times 4 \rightarrow \square$$

She sells each of these cans for 90p.
Calculate how much money she receives.

$$\square \times 90 = \square \text{ p}$$

- 1d** How many cans does Saffron have remaining?

$$\square - \square = \square$$

- 1e** Saffron sells the remaining cans at 3 for 60p.
Calculate how much money she receives.

$$(\square \div 3) \times 60 = \square \text{ p}$$

- 1f** Calculate the total amount of money Saffron receives.

$$\square + \square = \square \text{ p}$$

money from 90p cans money from 3 for 60p cans

- 1g** Calculate the profit that Saffron makes.

$$\square - \square = \square \text{ p}$$

total Saffron paid for cans of lemonade £ \square

16.7 Fractions and profit advanced: Answers



Sample Resource ©Toticity Limited

16.7 Fractions and profit advanced 1

- 1a** $£2 \times 3 = £6$ in total
1b $3 \times 6 = 18$ cans
1c $18 \div 9 = 2$, $2 \times 5 = 10$ cans,
 $10 \times 80p = \mathbf{800p}$
1d $18 - 10 = 8$ cans remaining
1e $(8 \div 2) \times 50p = \mathbf{200p}$
1f $800p + 200p = 1000p$
1g $1000p - 600p = 400p \rightarrow £4$ profit

16.7 Fractions and profit advanced 2

- 1a** $£3 \times 5 = £15$ in total
1b $5 \times 6 = 30$ cans
1c $30 \div 5 = 6$, $6 \times 4 = 24$ cans,
 $24 \times 90p = \mathbf{2160p}$
1d $30 - 24 = 6$ cans remaining
1e $(6 \div 3) \times 60p = \mathbf{120p}$
1f $2160p + 120p = 2280p$
1g $2280p - 1500p = 780p \rightarrow £7.80$ profit

16.7 Fractions and profit advanced: Test

- 1 money paid in total:**
 $£2 \times 8 = £16$ in total
- total number of cans:**
 $8 \times 6 = 48$ cans
- cans sold for 90p each:**
 $48 \div 3 = 16$, $16 \times 2 = 32$ cans
 $32 \times 90p = 2880p$
- remaining cans sold at 4 for 60p:**
 $48 - 32 = 16$ cans
 $(16 \div 4) \times 60p = 240p$
- total money received:**
 $240p + 2880p = 3120p$
- Profit:**
 $3120p - 1600p = 1520p \rightarrow \mathbf{£15.20}$ profit