

# White Rose Answers (Year 6)

Monday

# Multiply by 10, 100 and 1,000

1 Complete the calculations and sentences.

Use place value counters to help you.

| Th | H | T | O       | Tth         | Hth |
|----|---|---|---------|-------------|-----|
|    |   |   | ● ● ● ● | ● ● ● ● ● ● |     |

a)  $2.3 \times 10 =$

When the number is multiplied by 10 the counters move  place to the left.

b)  $2.3 \times 100 =$

When the number is multiplied by 100 the counters move  places to the left.

c)  $2.3 \times 1,000 =$

When the number is multiplied by 1,000 the counters move  places to the left.

2 Complete the diagram.



3 a) Draw counters on the place value charts to represent each calculation.

$4.4 \times 1$

| Th | H | T | O       | Tth     | Hth |
|----|---|---|---------|---------|-----|
|    |   |   | ● ● ● ● | ● ● ● ● |     |

$4.4 \times 10$

| Th | H | T | O               | Tth | Hth |
|----|---|---|-----------------|-----|-----|
|    |   |   | ● ● ● ● ● ● ● ● |     |     |

$4.4 \times 100$

| Th | H | T | O               | Tth | Hth |
|----|---|---|-----------------|-----|-----|
|    |   |   | ● ● ● ● ● ● ● ● |     |     |

$4.4 \times 1,000$

| Th | H | T | O               | Tth | Hth |
|----|---|---|-----------------|-----|-----|
|    |   |   | ● ● ● ● ● ● ● ● |     |     |

b) Complete the calculations.

$4.4 \times 1 =$

$4.4 \times 10 =$

$4.4 \times 100 =$

$4.4 \times 1,000 =$

What do you notice?

4 Complete the calculations.

a)  $13.44 \times 10 = 134.4$

d)  $4.4 \times 1,000 = 4,400$

b)  $41.4 \times 100 = 4,140$

e)  $103 = 1.03 \times 100$

c)  $0.415 \times 1,000 = 415$

f)  $30.44 = 3.044 \times 10$

5 Complete the diagrams.



What do you notice? Why does this happen?

They all give the same final answer because  
 $10 \times 10 \times 10 = 100 \times 10 = 1,000$



6 Write  $>$ ,  $<$  or  $=$  to compare the number sentences.

$1.4 \times 10 \times 10 \times 10$   $\boxed{=}$   $1.4 \times 1,000$

$1.4 \times 10 \times 100$   $\boxed{=}$   $1.4 \times 1,000$

$1.4 \times 10 \times 10$   $\boxed{<}$   $1.4 \times 1,000$

$1.4 \times 10 \times 2$   $\boxed{<}$   $1.4 \times 100$

7 Kim is calculating  $14.3 \times 200$   
She writes this as her answer.

$$14.3 \times 200 = 28.600$$

Explain Kim's mistake.

She has multiplied by 2 and added two  
zeros. She hasn't considered the place value  
of each digit.  $14.3 \times 200 = 2860$

8 Use the cards to complete the calculation.

You can use each card more than once.



E.g.  $0.002$   $\boxed{\times 10}$   $\boxed{\times 100}$   $\boxed{\times 1,000}$   $= 2,000$

How many ways is it possible to complete this calculation?

Talk about it with a partner.

# Divide by 10, 100 and 1,000

1 Complete the calculations and sentences.

Use place value counters to help you.

| Th | H | T        | O | Tth | Hth |
|----|---|----------|---|-----|-----|
|    | ● | ●●<br>●● |   |     |     |

a)  $140 \div 10 =$

When the number is divided by 10 the counters move  place to the right.

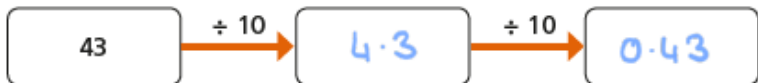
b)  $140 \div 100 =$

When the number is divided by 100 the counters move  places to the right.

c)  $140 \div 1,000 =$

When the number is divided by 1,000 the counters move  places to the right.

2 Complete the diagram.



3 a) Draw counters to represent the calculations.

$123 \div 1$

| H | T  | O       | Tth | Hth | Thth |
|---|----|---------|-----|-----|------|
| ○ | ○○ | ○○<br>○ |     |     |      |

$123 \div 10$

| H | T  | O       | Tth | Hth | Thth |
|---|----|---------|-----|-----|------|
| ○ | ○○ | ○○<br>○ | →   |     |      |

$123 \div 100$

| H | T  | O       | Tth | Hth | Thth |
|---|----|---------|-----|-----|------|
| ○ | ○○ | ○○<br>○ | →   |     |      |

$123 \div 1,000$

| H | T  | O       | Tth | Hth | Thth |
|---|----|---------|-----|-----|------|
| ○ | ○○ | ○○<br>○ | →   |     |      |

b) Complete the calculations.

$123 \div 1 =$

$123 \div 10 =$

$123 \div 100 =$

$123 \div 1,000 =$

What do you notice?

4 Complete the calculations.

a)  $16 \div 10 = 1.6$

d)  $332 \div 1,000 = 0.332$

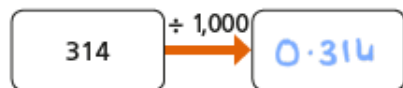
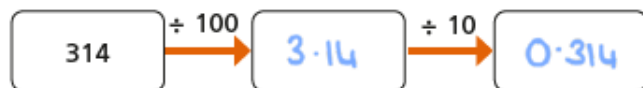
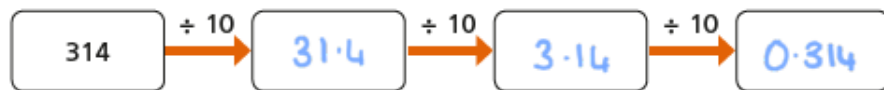
b)  $43.4 \div 100 = 0.434$

e)  $2.4 \div 200 = 0.012$

c)  $614 \div 1,000 = 0.614$

f)  $5.09 = 101.8 \div 20$

5 Complete the diagrams.



What do you notice? Why does this happen?

They all give the same final answer because  
 $10 \times 10 \times 10 = 100 \times 10 = 1,000$

\_\_\_\_\_  
\_\_\_\_\_



6 Write  $>$ ,  $<$  or  $=$  to compare the number sentences.

$5,400 \div 10 \div 10 \div 10 = 5,400 \div 1,000$

$60 \div 100 \div 10 < 600 \div 100$

$5.7 \div 10 = 57 \div 100$

$5,601 \div 1,000 > 5.601 \div 10$

7 Dexter is solving the calculation  $5,400 \div 100$



I think the answer is 54.00

Is Dexter correct? Yes

Explain your reasoning.

54.00 is the same as 54

8 Rosie is solving the calculation  $3,600 \div 200$

I think the answer is 0.36



Is Rosie correct? No

Explain your reasoning.

She has divide by 100 twice (10,000) she should have divided by 100 over 2 to give an answer of 18

Tuesday

# Multiply decimals by integers

1 Use place value counters to solve the calculations.

a)  $3.2 \times 3 =$  9.6

| Ones  | Tenths  |
|-------|---------|
| 1 1 1 | 0.1 0.1 |
| 1 1 1 | 0.1 0.1 |
| 1 1 1 | 0.1 0.1 |

b)  $4.6 \times 2 =$  9.2

| Ones    | Tenths              |
|---------|---------------------|
| 1 1 1 1 | 0.1 0.1 0.1 0.1 0.1 |
|         | 0.1                 |
| 1 1 1 1 | 0.1 0.1 0.1 0.1 0.1 |
|         | 0.1                 |

2 Solve the multiplication. Draw your answer.

$12.2 \times 3 =$  36.6

| Tens | Ones      | Tenths    |
|------|-----------|-----------|
| 0    | 0 0 0 0 0 | 0 0 0 0 0 |



3 Nijah uses long multiplication to solve  $3.72 \times 3$

|  |   |   |   |   |
|--|---|---|---|---|
|  |   |   |   |   |
|  |   | 3 | 7 | 2 |
|  | x |   |   | 3 |
|  |   | 0 | 0 | 6 |
|  |   | 2 | 1 | 0 |
|  |   | 9 | 0 | 0 |
|  |   | 1 | 1 | 6 |
|  |   |   |   |   |
|  |   |   |   |   |

Use long multiplication to work out the calculations.

a)

|  |   |   |   |   |
|--|---|---|---|---|
|  |   |   |   |   |
|  |   | 4 | 8 | 6 |
|  | x |   |   | 4 |
|  |   | 0 | 2 | 4 |
|  |   | 3 | 2 | 0 |
|  |   | 1 | 6 | 0 |
|  |   | 1 | 9 | 4 |
|  |   |   |   |   |
|  |   |   |   |   |

b)

|  |   |   |   |   |
|--|---|---|---|---|
|  |   |   |   |   |
|  |   | 2 | 0 | 9 |
|  | x |   |   | 6 |
|  |   | 0 | 5 | 4 |
|  |   | 0 | 0 | 0 |
|  |   | 1 | 2 | 0 |
|  |   | 1 | 2 | 5 |
|  |   |   |   |   |
|  |   |   |   |   |

4 Work out the multiplications.

a)  $5.2 \times 4 =$  20.8

d) 7.02 =  $2.34 \times 3$

b)  $14.3 \times 3 =$  42.9

e)  $11.505 \times 4 =$  46.02

c)  $6 \times 9.1 =$  54.6

f)  $9.602 \times 6 =$  57.612



- 5 0.25 kg of flour is needed to make one cake.  
How much flour is needed to make four cakes?



1 kg

- 6 Work out the multiplications.

a)  $7.2 \times 2 = 14.4$

$7.2 \times 4 = 28.8$

$14.4 \times 4 = 57.6$

$7.2 \times 8 = 57.6$

b)  $10.35 = 3.45 \times 3$

$103.5 = 34.5 \times 3$

$1,035 = 345 \times 3$

- 7 Amir is solving  $3.4 \times 4$



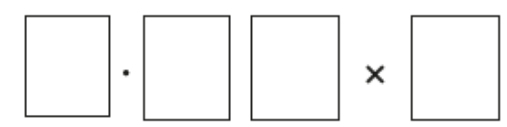
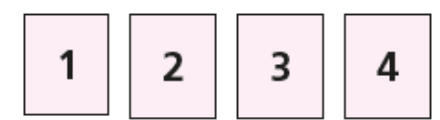
To solve this, I did  $34 \times 4$ , which was 136. Then I multiplied my answer by 10 to get an answer of 1,360.

Do you agree with Amir? NO

Explain why.

34 is ten times bigger than 3.4 so he should have divided by 10 to get 13.6

- 8 Use the digits 1, 2, 3 and 4 once each to create a calculation..



- a) How many different products can you make?

*Various answers*

- b) What is the greatest possible product?

12.84

- c) What is the smallest possible product?

0.234

- d) What is the product closest to 12?

12.36

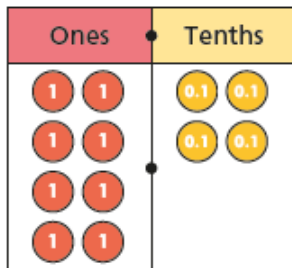
Compare answers with a partner.

Wednesday

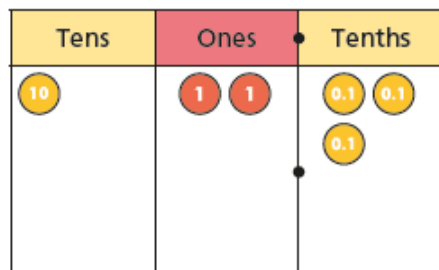
# Divide decimals by integers

1 Use place value counters to work out the divisions.

a)  $8.4 \div 4 = \boxed{2.1}$

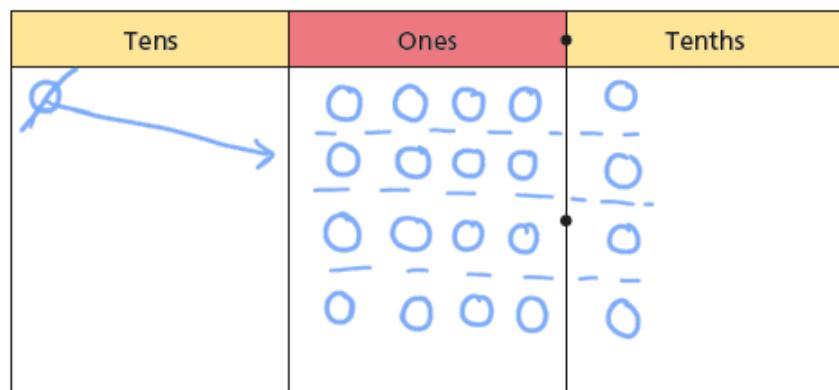


b)  $12.3 \div 3 = \boxed{4.1}$

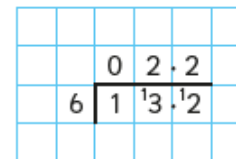


2 Work out the division. Draw your answer.

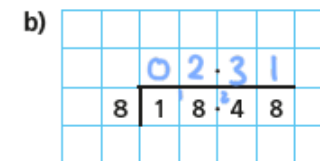
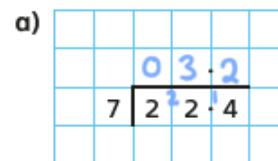
$16.4 \div 4 = \boxed{4.1}$



3 Brett uses short division to work out  $13.2 \div 6$



Use short division to work out the calculations.



4 Work out the divisions.

a)  $25.6 \div 8 = \boxed{3.2}$

d)  $\boxed{3.89} = 19.45 \div 5$

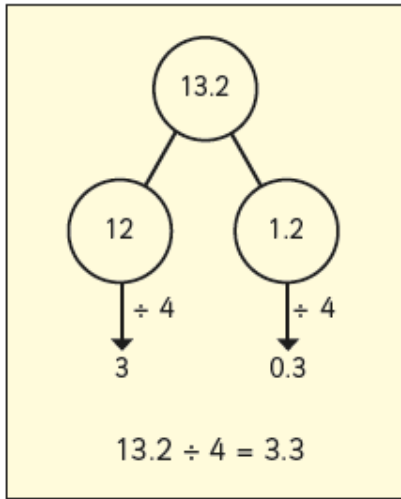
b)  $14.8 \div 4 = \boxed{3.7}$

e)  $202.35 \div 3 = \boxed{67.45}$

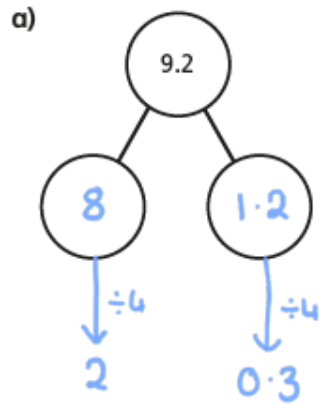
c)  $18.48 \div 6 = \boxed{3.08}$

f)  $105.12 \div 9 = \boxed{11.68}$

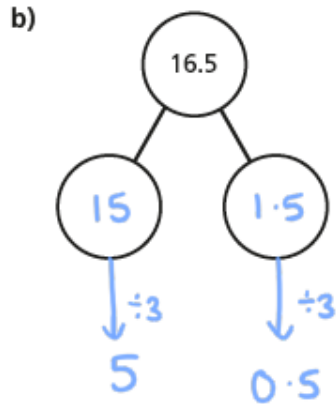
- 5 Esther solves  $13.2 \div 4$  by partitioning 13.2 into two numbers that are easier to divide.



Use Esther's method to complete the part-whole model and calculation.



$$9.2 \div 4 = \boxed{2.3}$$



$$16.5 \div 3 = \boxed{5.5}$$

Compare answers with a partner. Did you partition your numbers in the same way?

- 6 Work out the divisions.

a)  $9.64 \div 4 = \boxed{2.41}$

$96.4 \div 4 = \boxed{24.1}$

$0.964 \div 4 = \boxed{0.241}$

$9.64 \div 8 = \boxed{1.205}$

b)  $19.44 \div 9 = \boxed{2.16}$

$19.53 \div 9 = \boxed{2.17}$

$19.62 \div 9 = \boxed{2.18}$

- 7 Fill in the missing numbers.

$3.6 \div 4 = 36 \div \boxed{40}$

$3.6 \div 4 = \boxed{7.2} \div 8$

- 8 Complete the calculation.

eg.  $8.4 \div \boxed{2} = 4.2 \div \boxed{1}$

How many different solutions can you find?

What patterns do you notice? Talk about it with a partner.



Thursday

## Decimals as fractions

1 Complete the sentences.

a) 

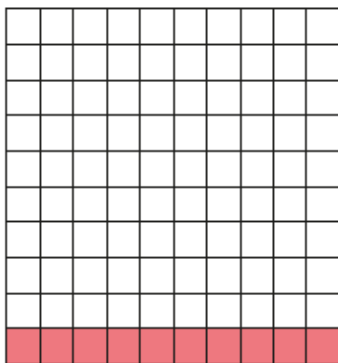
|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

The whole has been divided into  equal parts.

Each part is worth

This is equivalent to

b)



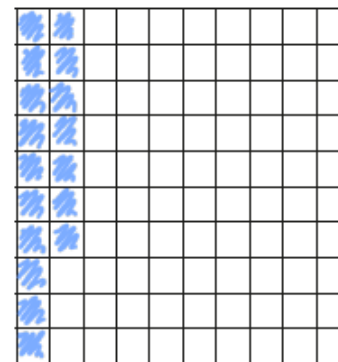
The whole has been divided into  equal parts.

Each part is worth

parts out of  are shaded.

This is equivalent to  or

2 a) Shade 0.17 of the hundred square.



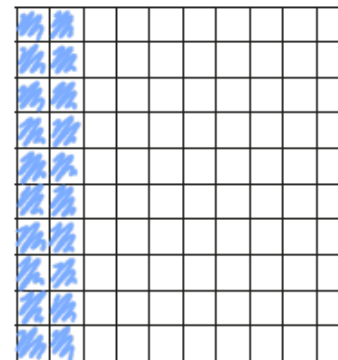
Complete the sentence.

parts out of  are shaded.

Write 0.17 as a fraction.

0.17 =

b) Shade 0.2 of the hundred square.



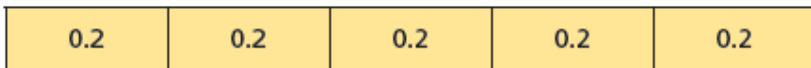
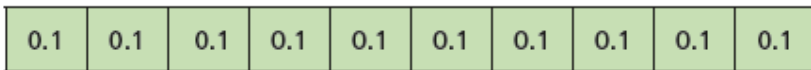
Complete the sentence.

parts out of  are shaded.

Write 0.2 as a fraction in its simplest form.

0.2 =

3



Use the bar models to fill in the missing numbers.

$$0.2 = \frac{2}{10} = \frac{1}{5}$$

$$0.4 = \frac{4}{10} = \frac{2}{5}$$

$$0.8 = \frac{8}{10} = \frac{4}{5}$$

4

Fill in the missing numbers.

$$a) 0.54 = \frac{54}{100} = \frac{27}{50}$$

$$b) 0.6 = \frac{6}{10} = \frac{3}{5}$$

$$c) 0.3 = \frac{3}{10} = \frac{30}{100}$$

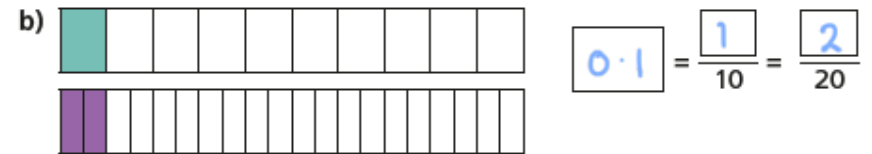
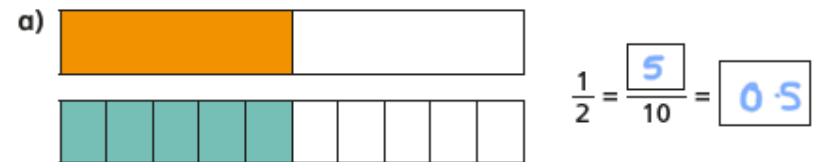
$$d) 0.09 = \frac{9}{100}$$

$$e) 0.9 = \frac{9}{10}$$

$$f) \frac{21}{50} = \frac{42}{100} = 0.42$$

5

Use the bar models to fill in the missing numbers.

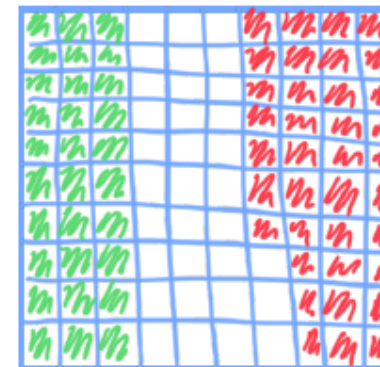


6



$0.3 = \frac{3}{10}$  so  $0.37 = \frac{37}{10}$

Draw a diagram to show that Ron is wrong.



$$0.3 = \frac{3}{10}$$

$$0.37 = \frac{37}{100}$$

# White Rose Answers (Year 5)

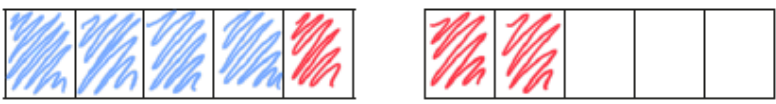


Monday

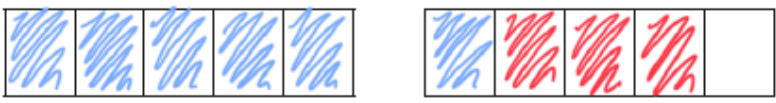
# Add and subtract fractions

1 Complete the calculations.

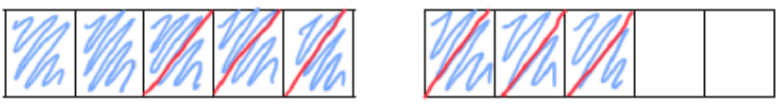
Use the bar models to help you.

a) 

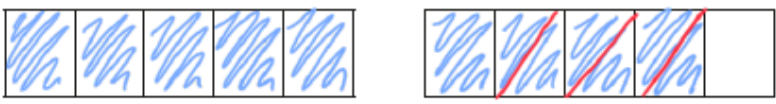
$$\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5}$$

b) 

$$\frac{6}{5} + \frac{3}{5} = \frac{9}{5} = 1\frac{4}{5}$$

c) 

$$\frac{8}{5} - \frac{6}{5} = \frac{2}{5}$$

d) 

$$\frac{9}{5} - \frac{3}{5} = \frac{6}{5} = 1\frac{1}{5}$$


2 Complete the calculations.

a)  $\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$

f)  $\frac{17}{9} - \frac{8}{9} = \frac{9}{9} = 1$

b)  $\frac{4}{7} + \frac{3}{7} = \frac{7}{7} = 1$

g)  $\frac{16}{9} - \frac{8}{9} = \frac{8}{9}$

c)  $\frac{4}{7} + \frac{4}{7} = \frac{8}{7} = 1\frac{1}{7}$

h)  $\frac{7}{9} + \frac{2}{9} + \frac{8}{9} = \frac{17}{9} = 1\frac{8}{9}$

d)  $\frac{8}{7} - \frac{3}{7} = \frac{5}{7}$

i)  $\frac{7}{15} + \frac{2}{15} + \frac{8}{15} = \frac{17}{15} = 1\frac{2}{15}$

e)  $\frac{7}{9} + \frac{8}{9} = \frac{15}{9} = 1\frac{2}{3}$

j)  $\frac{7}{15} - \frac{2}{15} + \frac{8}{15} = \frac{13}{15}$

3

$$\frac{\square}{8} + \frac{\square}{8} = \frac{13}{8}$$

What could the missing numerators be?

Give six different possibilities.

e.g.

$$\frac{1}{8} + \frac{12}{8} = \frac{13}{8}$$

$$\frac{4}{8} + \frac{9}{8} = \frac{13}{8}$$

$$\frac{2}{8} + \frac{11}{8} = \frac{13}{8}$$

$$\frac{5}{8} + \frac{8}{8} = \frac{13}{8}$$

$$\frac{3}{8} + \frac{10}{8} = \frac{13}{8}$$

$$\frac{7}{8} + \frac{6}{8} = \frac{13}{8}$$

4 Dora has  $2\frac{3}{8}$  litres of juice.

She pours out  $\frac{9}{8}$  litres of juice.

How many litres of juice does she have left?

Dora has  $1\frac{1}{4}$  litres left.

5 Fill in the missing numerators.

a)  $\frac{3}{8} + \frac{\boxed{10}}{8} = \frac{13}{8}$

b)  $\frac{13}{8} - \frac{\boxed{6}}{8} = \frac{7}{8}$

c)  $\frac{13}{8} - \frac{\boxed{5}}{8} = 1$

d)  $\frac{11}{9} + \frac{\boxed{11}}{9} = \frac{22}{9} = 2\frac{\boxed{4}}{9}$

e)  $\frac{11}{9} + \frac{\boxed{9}}{9} = \frac{\boxed{20}}{9} = 2\frac{2}{9}$

f)  $\frac{22}{9} - \frac{\boxed{2}}{9} = \frac{\boxed{20}}{9} = 2\frac{2}{9}$

g)  $\frac{4}{7} + \frac{\boxed{6}}{7} + \frac{4}{7} = 2$

h)  $\frac{5}{7} + \frac{\boxed{4}}{7} + \frac{5}{7} = 2$

i)  $\frac{6}{7} + \frac{\boxed{2}}{7} + \frac{6}{7} = 2$

j)  $\frac{14}{7} + \frac{\boxed{3}}{7} + \frac{4}{7} = 3$

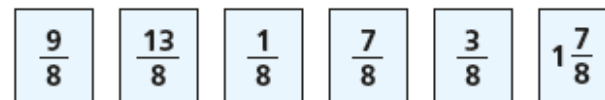
k)  $\frac{15}{7} + \frac{\boxed{1}}{7} + \frac{5}{7} = 3$

l)  $\frac{16}{7} + \frac{\boxed{6}}{7} + \frac{6}{7} = 4$

Compare answers with a partner. What do you notice?



6 Here are some fraction cards.



Use the cards to write pairs of fractions with a total of 2

$1\frac{7}{8} + \frac{1}{8} = 2$

$\frac{13}{8} + \frac{3}{8} = 2$

$\frac{9}{8} + \frac{7}{8} = 2$

7 Annie and Dexter both have a skipping rope.

Annie's rope is  $\frac{3}{4}$  m shorter than Dexter's rope.

The ropes are  $\frac{13}{4}$  m altogether.

How long is each skipping rope?

Annie's rope is  $1\frac{1}{4}$  m long.

Dexter's rope is 2 m long.

Tuesday

# Add fractions

1 Complete the calculations.

Use the bar models to help you.

a)



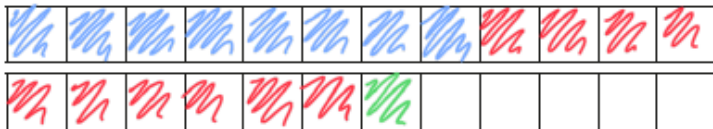
$$\frac{1}{2} + \frac{7}{10} = \frac{10}{10} = 1\frac{1}{5}$$

b)



$$\frac{1}{2} + \frac{3}{10} + \frac{1}{5} = \frac{10}{10} = 1$$

c)



$$\frac{2}{3} + \frac{5}{6} + \frac{1}{12} = \frac{19}{12} = 1\frac{7}{12}$$



2 Complete the additions.

$$\text{a) } \frac{4}{5} + \frac{7}{20} = \frac{23}{20} = 1\frac{3}{20}$$

$$\text{d) } \frac{4}{3} + \frac{5}{12} = \frac{21}{12} = 1\frac{3}{4}$$

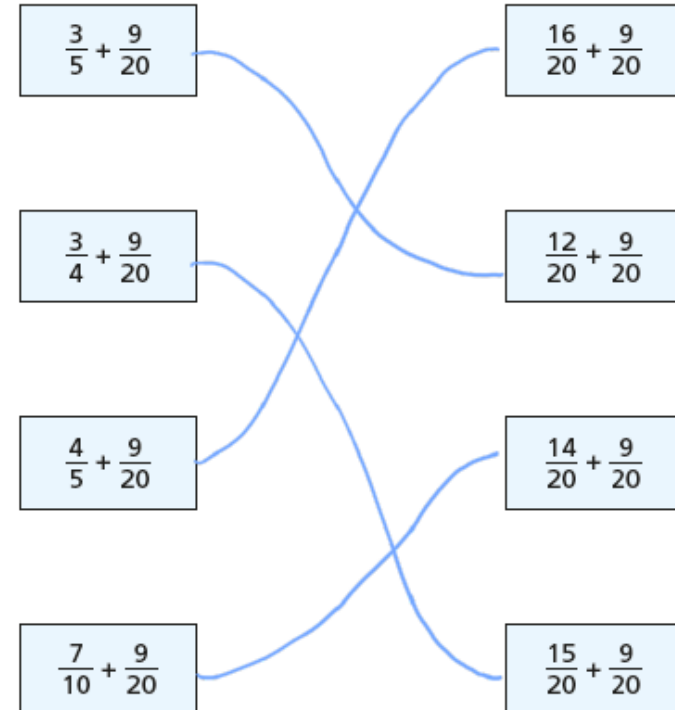
$$\text{b) } \frac{5}{4} + \frac{7}{20} = \frac{32}{20} = 1\frac{3}{5}$$

$$\text{e) } \frac{3}{5} + \frac{11}{15} = \frac{20}{15} = 1\frac{1}{3}$$

$$\text{c) } \frac{3}{4} + \frac{5}{12} = \frac{14}{12} = 1\frac{1}{6}$$

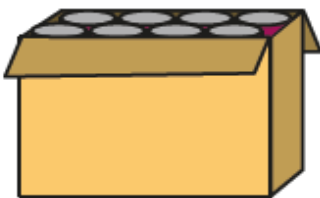
$$\text{f) } \frac{5}{3} + \frac{11}{15} = \frac{36}{15} = 2\frac{2}{5}$$

3 Match the additions that have the same answer.



4 Dexter has some tins of food. There are four types of food: beans, sweetcorn, soup and tomatoes.

- The total weight of all the tins is 2 kg.
- The tins of beans weigh  $\frac{2}{3}$  kg.
- The tins of sweetcorn weigh  $\frac{5}{12}$  kg.
- The tins of soup weigh  $\frac{1}{4}$  kg.



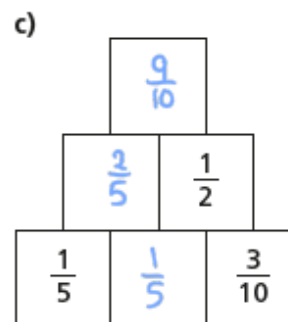
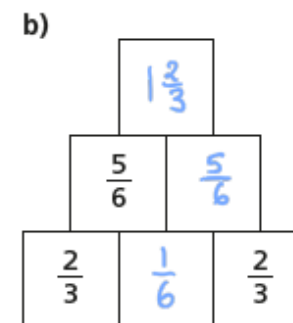
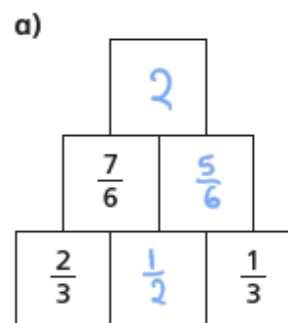
a) Work out the total weight of the tins of beans, sweetcorn and soup.

$$1\frac{1}{3} \text{ kg}$$

b) How much do the tins of tomatoes weigh?

$$\frac{2}{3} \text{ kg}$$

5 Complete the addition pyramids.



6 What could the three missing numerators be?

$$\frac{\square}{4} + \frac{\square}{12} + \frac{\square}{3} = \frac{13}{12}$$

Give three different possibilities.

$$\frac{1}{4} + \frac{6}{12} + \frac{1}{3} = \frac{13}{12}$$

$$\frac{2}{4} + \frac{3}{12} + \frac{1}{3} = \frac{13}{12}$$

$$\frac{1}{4} + \frac{2}{12} + \frac{2}{3} = \frac{13}{12}$$

Wednesday

# Add mixed numbers

1 Teddy and Mo are adding mixed numbers.



$$3\frac{1}{4} + 2\frac{5}{8} = 5 + \frac{7}{8} = 5\frac{7}{8}$$

Teddy

$$3\frac{1}{4} + 2\frac{5}{8} = \frac{26}{8} + \frac{21}{8} = \frac{47}{8} = 5\frac{7}{8}$$



Mo

Whose method do you prefer? various

Talk about it with a partner.

2 Complete the calculations.

a)  $1\frac{2}{5} + 2\frac{3}{10} = 3\frac{7}{10}$

b)  $2\frac{2}{5} + 2\frac{3}{10} = 4\frac{7}{10}$

c)  $1\frac{3}{4} + 3\frac{3}{20} = 4\frac{9}{20}$

e)  $4\frac{1}{4} + 2\frac{11}{16} = 6\frac{15}{16}$

d)  $1\frac{3}{16} + 4\frac{3}{4} = 5\frac{15}{16}$

f)  $1\frac{4}{15} + 3\frac{2}{3} = 4\frac{14}{15}$

3



$$2\frac{3}{5} + 1\frac{7}{10} = 3 + \frac{13}{10} = 3\frac{13}{10}$$

How can Ron improve his answer?

$\frac{13}{10} = 1\frac{3}{10}$  so  $3\frac{13}{10} = 4\frac{3}{10}$

4

Complete the additions.

a)  $2\frac{3}{4} + 3\frac{5}{12} = 6\frac{1}{6}$

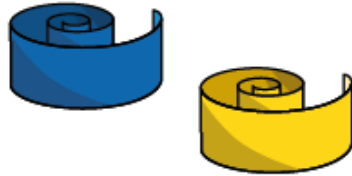
b)  $3\frac{2}{3} + 2\frac{7}{12} = 6\frac{1}{6}$



$$c) 5\frac{1}{6} + 3\frac{11}{12} = 9\frac{1}{2}$$

$$d) 6\frac{7}{15} + 3\frac{3}{5} = 10\frac{1}{3}$$

5 A blue ribbon is  $2\frac{4}{9}$  metres long.



A yellow ribbon is  $3\frac{2}{3}$  metres long.

a) What is the total length of the blue and yellow ribbon?

$$6\frac{1}{9} \text{ m}$$

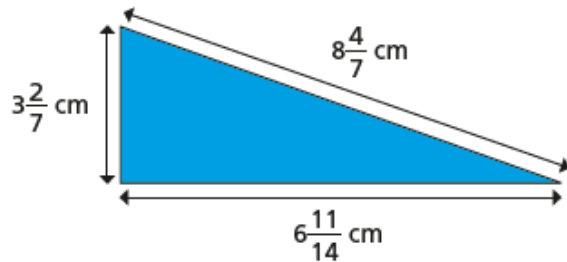
b) A red ribbon is  $1\frac{5}{18}$  metres longer than the yellow ribbon.

How long is the red ribbon?



$$4\frac{17}{18} \text{ m}$$

6 Calculate the perimeter of the triangle.



$$18\frac{9}{14} \text{ cm}$$

7 Complete the calculation in three different ways.

e.g.

$$1\frac{1}{5} + 5\frac{8}{15} = 6 + \frac{11}{15} = 6\frac{11}{15}$$

$$3\frac{2}{5} + 3\frac{5}{15} = 6 + \frac{11}{15} = 6\frac{11}{15}$$

$$1\frac{4}{5} + 4\frac{14}{15} = 6 + \frac{11}{15} = 6\frac{11}{15}$$

Compare answers with a partner.

8 Here are some number cards.



a) What is the greatest total you can make with two cards?

$$8\frac{5}{12}$$

b) What is the smallest total you can make with two cards?

$$5\frac{1}{3}$$

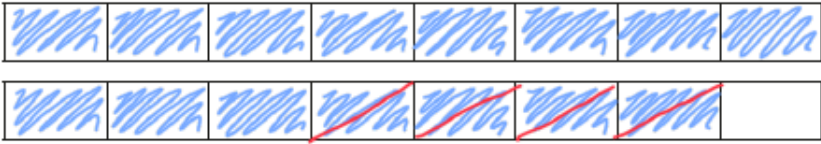
Thursday

# Subtract mixed numbers

1 Complete the subtractions.

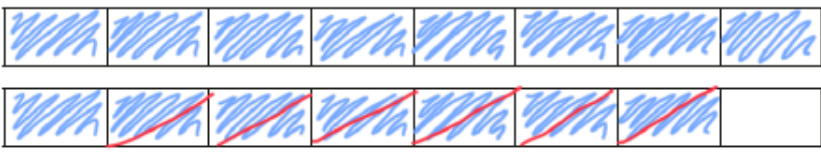
Use the bar models to help you.

a)



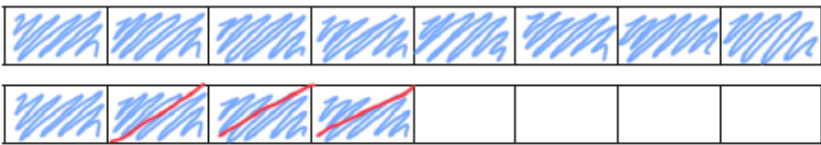
$$\frac{15}{8} - \frac{1}{2} = \boxed{1\frac{3}{8}}$$

b)



$$1\frac{7}{8} - \frac{3}{4} = \boxed{1\frac{1}{8}}$$

c)

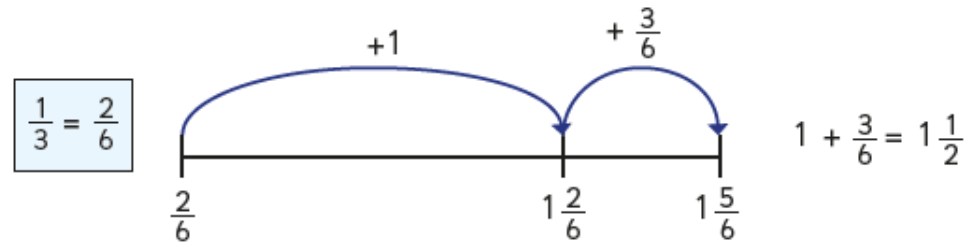


$$1\frac{1}{2} - \frac{3}{8} = \boxed{1\frac{1}{8}}$$

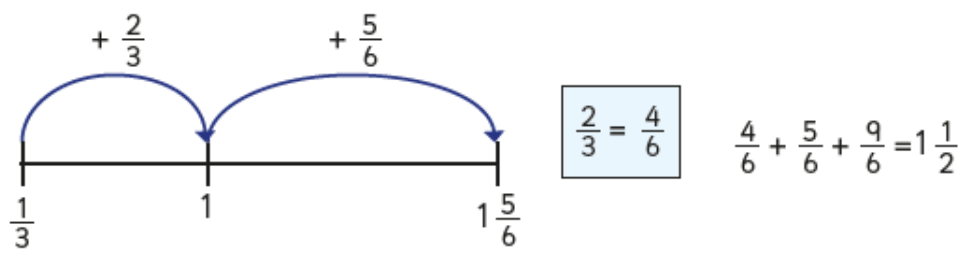


2 Dexter and Whitney are using number lines to work out  $1\frac{5}{6} - \frac{1}{3}$

Dexter's method

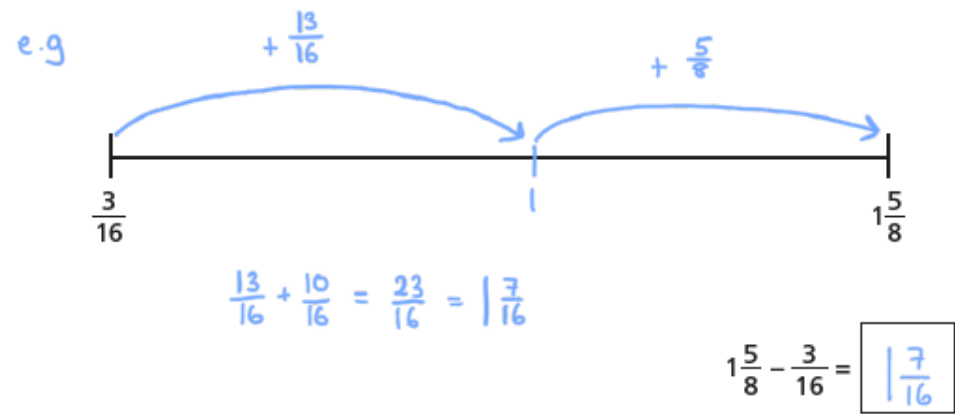


Whitney's method



What is the same and what is different about these methods?

Use one of the methods to work out  $1\frac{5}{8} - \frac{3}{16}$



3 Complete the subtractions.

a)  $3\frac{1}{4} - \frac{5}{24} = 3\frac{1}{24}$

d)  $7\frac{5}{6} - \frac{13}{24} = 7\frac{7}{24}$

b)  $3\frac{3}{16} - \frac{1}{8} = 3\frac{1}{16}$

e)  $4\frac{4}{9} - \frac{4}{27} = 4\frac{8}{27}$

c)  $2\frac{5}{6} - \frac{2}{3} = 2\frac{1}{6}$

f)  $6\frac{11}{12} - \frac{3}{4} = 6\frac{1}{6}$

4 A jug contains  $1\frac{3}{5}$  litres of orange juice.

Eva pours  $\frac{4}{15}$  litres into a glass.

How much orange juice is left in the jug?



There are  $1\frac{1}{3}$  litres of orange juice left in the jug.

5 Find three different ways to complete the calculation.

e.g.

$3\frac{1}{5} - \frac{3}{20} = 3\frac{1}{20}$

$3\frac{3}{5} - \frac{11}{20} = 3\frac{1}{20}$

$3\frac{2}{5} - \frac{7}{20} = 3\frac{1}{20}$

Are there any other ways to complete this calculation?

6 Three children take part in throwing competitions.

Here is the table of results.

|        | Javelin           | Shot Put          | Discus             |
|--------|-------------------|-------------------|--------------------|
| Dexter | $15\frac{1}{4}$ m | $7\frac{5}{12}$ m | $12\frac{3}{8}$ m  |
| Amir   | $13\frac{3}{8}$ m | $8\frac{1}{4}$ m  | $12\frac{7}{8}$ m  |
| Annie  | $14\frac{1}{3}$ m | 9 m               | $11\frac{5}{12}$ m |

Use the clues to complete the table.

- Annie's javelin throw is  $\frac{11}{12}$  m less than Dexter's.
- Amir's shot put throw is  $\frac{3}{4}$  m less than Annie's.
- Dexter's discus throw is  $\frac{1}{2}$  m less than Amir's.

# Dip and Pick 16 Answers

$$£5.49 - 45p = £5.04$$

$$504p \div 18p$$

28 cakes bought.

One possible approach...

Cakes are ? % more expensive,  
the box is ? p more expensive and the  
number of cakes and boxes bought x ?

Working systematically  
8 cakes at 18p and 4 cakes at 15p.

$$144p = 60p = 204p$$

$$20 \times 15 = 300p$$

$$300p + 45p = 345p$$

£3.45

$$20 \times 15 = 300p$$

$$300p + 45p = 345p$$

£3.45

$$20\% \text{ of } 300p = 60p$$

$$£3.60 + 45p$$

$$£3.45 + £4.05 = £7.05$$

(£3.60 = 20 at 18p each)

$$20 \times 15 = 300p$$

$$300p + 45p = 345p$$

£3.45

$$20\% \text{ of } 300p = 60p$$

$$£3.60 + 45p$$

$$£3.45 + £4.05 = £7.05$$

The most expensive cakes are 18p each.  
If the cakes cost 20p for £4.50 more than  
22 cakes could be bought.

Karen can therefore buy more than 22  
cakes with her money and  
she is correct.

# Reading Answers

**The Holiday**

26. *How often had the children been to stay in the cottage before? Circle the best answer.*

**Several times**

27. *Find and copy a sentence, used by the author near the beginning, which suggests this holiday would become more interesting than previous ones?*

**Little did they know that this would not just be any ordinary holiday!**

28. *Draw a line to match the following words to their meanings. One has been done for you.*

**Small – Little, insignificant; not very big in size.**

**Secluded – Sheltered, private or screened from general view or activity; not seen or visited by many people.**

**Jagged – Harsh, rough or uneven; having ragged notches or sharp points protruding.**

**Isolated – Alone; separated or far away from other persons, buildings or things.**

29. *What simile does the author use for the helicopter hovering above the sea? Why is this a good comparison?*

**Like a giant hair dryer**

**Make an appropriate reference to the helicopter being noisy/ forcing air down onto the sea/ blades spinning around/ making waves/ ripples in the surface/ creating a blowing effect etc.**

30. *What does the word 'eagerly' tell you about the children at this point?*

**They were keen/ enthusiastic/ excited to see more/ impatient in wanting to get a better view.**

31. *What was Maya worried about when getting closer to the scene?*

**What her Mum would say**

**That they were going too far/ being too far**

**That the people might be dangerous**

**They were going to get into more trouble**

32. *What do you think this equipment was?*

**Filming equipment e.g. cameras, microphones.**



33. *When the man was coming towards them, why did the children think they would not be able to turn back?*

**They would be seen and the route was tricky.**

34. *What special treatment did each child receive from the film crew at the end?*

**Maya was given a jacket to wear which said 'Director'**

**Seb was allowed to sit in a special chair/ hold the megaphone.**

35. *How do the children's feelings about the holiday change through the beginning, middle and end of the story?*

**An answer relating to three different feelings about the holiday from the children at different points in the story.**

36. *How do you think the children's mother will feel when she finds out what has happened?*

**Happy/excited that the children had a good time as Seb say 'I can't wait to tell Mum!'**

**Annoyed at the children for going further than they were allowed as Maya says 'what will Mum say?'**

**Relieved that the children are ok**

**Jealous/envious/disappointed that she missed out as the rest of the family were involved in the excitement**

## The Telephone Box

1. Which two other tourist symbols of Great Britain is the red telephone box compared to?

**Black London taxis**

**Red double-decker buses**

2. Why is the public telephone box not as useful to people anymore?

**People have mobile phones.**

3. Name one of the famous landmarks worked on by Sir Giles Gilbert Scott.

**Liverpool Cathedral, Waterloo Bridge, Battersea Power Station.**

4. Order the events, showing some of the major events in the history of the telephone box. The first one has been done for you.

**Production of K6 design ended – 3**

**Famous K6 design first introduced – 2**

**Some phone boxes turned into libraries and other uses – 5**

**First standard kiosk introduced – 1**

**Adopt a Kiosk scheme introduced – 4**

5. According to the section 'A Modern Redesign', which of these have become a new use for a disused telephone box? Tick two.

**Coffee Shop**

**Art Gallery**

6. How does the author seem pleased and make it seem like a positive idea that the phone boxes are being given new uses?

**Use of positive vocabulary such as 'thankfully' and 'happily'.**

7. Write the correct letter in each box to match this key. (Top to bottom)

**B**

**A**

**D**

**C**

8. Write down two meanings of the word 'novel'.

**A novel is a type of fiction story book**

**Novel can mean interesting, new, different or unusual e.g. novel idea.**

9. Find and copy two words from the article which mean 'very small'.

**Miniature**

**Tiny**

10. How do you think local residents feel about the phone box being turned into a library? Give evidence from the text to support your answer.

**Eileen Greenhouse said it was a 'perfect solution'.**

**'They had been missing out on a library for years.'**

**The phone box was previously starting to look 'a bit shabby and neglected/ had stood unused for several years.'**

**It has now been 'spruced up'/ 'has genuinely use for local people to enjoy again.'**

11. Tick True or False in the following table about the Smallsden village telephone box that was turned into a library.

**The telephone box cost campaigners only one pound to buy – true**

**The telephone box had up to two hundred books – True**

**The telephone box is open seven days per week – False**

12. (a) Where else does the Parish Councillor hope that tourists to the area will visit?

**The pub and newsagent.**

12 (b) Why do you think he is happy that they are coming to the area?

**He hopes they will spend their money in local places.**