TARGET To solve multi-step word problems.

Example

A tie shop has 684 ties for sale.
One ninth are sold on Friday.
129 are sold on Saturday.
How many ties are left?

$684 \div 9 = 76$
$129 + 76 = 215$
$684 - 215 = 469$
Answer   *469 ties are left.*

A

1. There are 227 children in a school. Five of the classes in the school have 28 children each. The other three classes each have the same number of children. How many children are there in each of these three classes?

2. There are 200 raffle tickets. Three quarters are sold. 27 more are sold. How many tickets are left?

3. A builder has 500 bricks. He uses 180 in the morning and 50 per cent of the rest in the afternoon. How many bricks has he used?

4. A holiday costs £65 per person per day. How much will it cost five people for two weeks?

5. A rectangle is three times longer than it is wide. It is 42 cm long. What is its perimeter?

B

1. In an election 177 people voted for one of three candidates. Tara received one third of the votes. Drew received 65 votes. How many people voted for Moira?

2. A corner shop opens for 15 hours every weekday, 12 hours on Saturdays and 9 hours on Sunday. How many hours is it open each week?

3. Leah and Nadia both earn £972 per week. Leah saves 30% of her earnings. Nadia saves one third. How much more does Nadia save?

4. During one weekend a store had 13 255 customers. 1879 more came on Saturday than on Sunday. How many customers came on each day?

5. In one week's training a triathlete runs five times further than he swims and cycles four times further than he runs. Altogether he runs 28·6 km. What is the total distance he travels in training?

C

1. In March Edwin earns £2680. In April he earns 7% more. How much does he earn in the two months altogether?

2. A lorry makes three return journeys from London to Holyhead and two return journeys from London to Hull. The distance from London to Holyhead is 246 miles and from London to Hull is 186 miles. What is the lorry's total mileage?

3. There are 1560 people at a concert. Three eighths are men. 45% are women. How many children are in the audience?

4. A rectangle has a perimeter of 23·6 cm. One side is 3·8 cm. What is the area of the rectangle?

5. A car costs £9500 or the buyer can pay a 15% deposit and make eighteen monthly payments of £495. How much is saved by buying the car for £9500?

TARGET   To solve multi-step word problems.

Example

A bicycle frame weighs 12·75 kg. Both wheels weigh 1·85 kg. What is the total weight of the frame and the wheels?

$1·85 \times 2 = 3·7$

$12·75 + 3·7 = 14·45$

Answer
Total weight is 14·45 kg.

A

1. DVDs cost £9·50. Oscar takes advantage of a buy one and get another for half price offer. How much does he pay for two DVDs?

2. Malik buys three teas and one coffee for £5·40 altogether. Teas cost £1·25. What does the coffee cost?

3. A mobile library has 3268 books. During the week 1374 books are returned and 925 are borrowed. How many books does the library have now?

4. Flora has 1·5 litres of drink. She pours it equally into two jugs. 0·38 litres is used from one jug. How much drink is left in this jug?

5. A wire is 4 m long. 10% is cut off. The rest is cut into four equal lengths. How long is each of these four lengths?

B

1. T-shirts cost £4.35 each. Duane buys four for £12·79. How much has he saved?

2. Diana makes a muesli with 425 g of oat flakes, 220 g of nuts and 255 g of dried fruit. The mixture provides fifteen portions. How much muesli is in each portion?

3. A reel of cable is 62·8 m long. 27·26 m is cut off. A further 9·55 m is used. How much cable is left on the reel?

4. There is 0·65 litres of pasta sauce in a jar. There are 12 jars in a box. How much sauce is in six boxes?

5. The temperature is 2·6°C at midnight. It falls 3·9°C by dawn before rising 8·5°C by midday. What is the temperature at midday?

6. There are sixty questions in a test. Melvin gets 70% right. Miles gets five twelfths wrong. How many more questions does Melvin get right than Miles?

C

1. A painting has a length of 17·5 cm and a perimeter of 63 cm. What is its area?

2. Sadiq needs three planks 2·65 m long and twelve planks 3·4 m long. What is the total length of the planks he needs?

3. Claire has read four ninths of the 162 pages in her book. How many more pages will she have to read before she is two thirds of the way through the book?

4. Fish costs £6·80 per kilogram. Todd buys 550 g. How much change does he receive from £10?

5. Four cartons of fruit juice hold 0·74 litres altogether. How many litres of juice are needed for fifty cartons?

6. One 16·5 kg bag of dog food feeds three corgis for a week. How many kilograms of dog food are needed to feed the 72 corgis in a kennel for a week?

TARGET   To use common factors to simplify fractions.

To simplify a fraction to its lowest terms divide both the numerator and the denominator by the highest common factor.
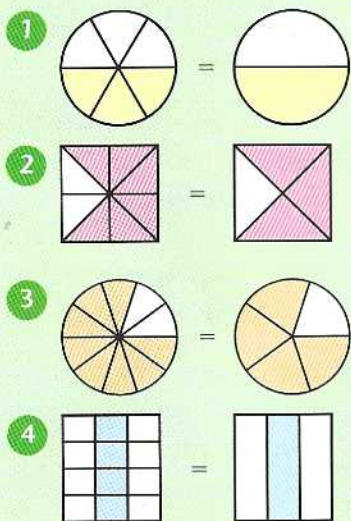
Example

$$\frac{12\ (\div 4)}{20\ (\div 4)} = \frac{3}{5}$$

This process is called cancelling. It is shown like this: $\frac{\cancel{12}}{\cancel{20}}\frac{3}{5}$

A

Write the equivalent fractions shown in each diagram.

1 =

2 =

3 =

4 =

Copy and complete to simplify the fraction to its lowest terms.

5 $\frac{6\ (\div 6)}{12\ (\div 6)} = \frac{1}{\square}$

6 $\frac{3\ (\div 3)}{9\ (\div 3)} = \frac{\square}{3}$

7 $\frac{9\ (\div 3)}{12\ (\div 3)} = \frac{\square}{\square}$

8 $\frac{4\ (\div 2)}{10\ (\div 2)} = \frac{\square}{\square}$

9 $\frac{8\ (\div 4)}{12\ (\div 4)} = \frac{\square}{\square}$

10 $\frac{4\ (\div 4)}{8\ (\div 4)} = \frac{\square}{\square}$

B

Simplify the fraction shown in each diagram to its lowest terms.

1   **5**

2   **6**

3   **7**

4   **8**
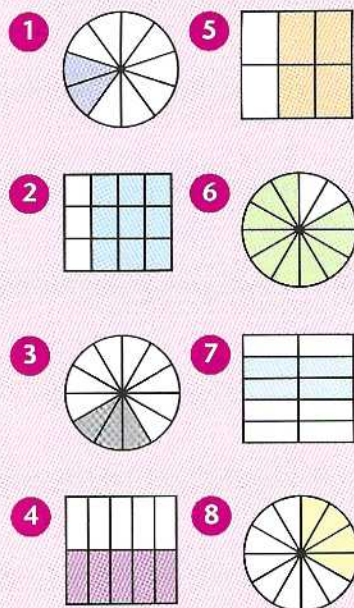
Cancel each fraction to its lowest terms.

9 $\frac{8}{10}$ **15** $\frac{12}{18}$

10 $\frac{3}{9}$ **16** $\frac{6}{8}$

11 $\frac{10}{25}$ **17** $\frac{10}{12}$

12 $\frac{8}{12}$ **18** $\frac{16}{20}$

13 $\frac{2}{8}$ **19** $\frac{7}{21}$

14 $\frac{70}{100}$ **20** $\frac{6}{9}$

C

Cancel each fraction to its lowest terms.

1 $\frac{4}{16}$ **11** $\frac{16}{40}$

2 $\frac{30}{100}$ **12** $\frac{80}{100}$

3 $\frac{15}{20}$ **13** $\frac{15}{18}$

4 $\frac{6}{18}$ **14** $\frac{14}{24}$

5 $\frac{85}{100}$ **15** $\frac{15}{25}$

6 $\frac{42}{48}$ **16** $\frac{35}{50}$

7 $\frac{21}{35}$ **17** $\frac{30}{96}$

8 $\frac{44}{100}$ **18** $\frac{54}{81}$

9 $\frac{16}{24}$ **19** $\frac{14}{16}$

10 $\frac{20}{36}$ **20** $\frac{32}{72}$

Write >, < or = in each box.

21 $\frac{12}{24}$ $\square$ $\frac{3}{5}$ **25** $\frac{12}{30}$ $\square$ $\frac{3}{8}$

22 $\frac{4}{5}$ $\square$ $\frac{16}{20}$ **26** $\frac{2}{3}$ $\square$ $\frac{15}{20}$

23 $\frac{12}{36}$ $\square$ $\frac{1}{4}$ **27** $\frac{8}{32}$ $\square$ $\frac{2}{10}$

24 $\frac{3}{4}$ $\square$ $\frac{21}{24}$ **28** $\frac{3}{5}$ $\square$ $\frac{24}{40}$

TARGET To use the highest common factor to simplify fractions.

To cancel a fraction divide both the numerator and the denominator by the highest common factor (HCF).
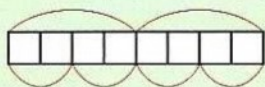
Examples

$\frac{8}{12}$ $\frac{2}{3}$ (HCF is 4) $\frac{9}{15}$ $\frac{3}{5}$ (HCF is 3)

A

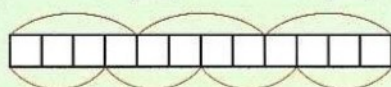Complete each pair of fractions.

1 $\frac{4}{8} = \frac{1}{\square}$ **2** $\frac{2}{8} = \frac{1}{\square}$

3 $\frac{4}{12} = \frac{1}{\square}$ **4** $\frac{3}{12} = \frac{1}{\square}$

5 $\frac{2}{10} = \frac{1}{\square}$ **6** $\frac{6}{10} = \frac{\square}{\square}$

$\frac{1}{2}$s $\frac{1}{2}$s
$\frac{1}{3}$s $\frac{1}{3}$s
$\frac{1}{4}$s $\frac{1}{4}$s
$\frac{1}{5}$s $\frac{1}{6}$s
$\frac{1}{8}$s $\frac{1}{8}$s
$\frac{1}{12}$s $\frac{1}{12}$s
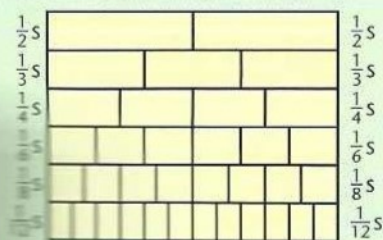
Use the fraction chart. Copy and complete.

7 $\frac{2}{12} = \frac{\square}{6}$ **11** $\frac{9}{12} = \frac{\square}{4}$

8 $\frac{4}{12} = \frac{\square}{3}$ **12** $\frac{3}{6} = \frac{\square}{2}$

9 $\frac{2}{8} = \frac{\square}{4}$ **13** $\frac{8}{12} = \frac{\square}{3}$

10 $\frac{4}{6} = \frac{\square}{3}$ **14** $\frac{6}{8} = \frac{\square}{4}$

B

1
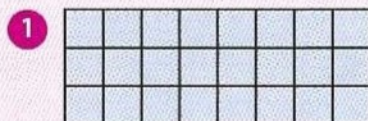
What fraction of 24 is:
a) 3   c) 8
b) 9   d) 16?

2

What fraction of 30 is:
a) 6   c) 5
b) 24   d) 25?

Cancel each fraction into its simplest form.

3 $\frac{3}{12}$ **11** $\frac{5}{10}$

4 $\frac{6}{9}$ **12** $\frac{10}{12}$

5 $\frac{4}{8}$ **13** $\frac{12}{16}$

6 $\frac{6}{15}$ **14** $\frac{75}{100}$

7 $\frac{90}{100}$ **15** $\frac{6}{10}$

8 $\frac{2}{6}$ **16** $\frac{14}{20}$

9 $\frac{2}{16}$ **17** $\frac{30}{100}$

10 $\frac{12}{18}$ **18** $\frac{20}{25}$

C

1 What fraction of 20 is:
a) 2   c) 5
b) 14   d) 15?

2 What fraction of 80 is:
a) 8   c) 10
b) 4   d) 50?

3 What fraction of 45 is:
a) 9   c) 27
b) 5   d) 20?

4 What fraction of £1 is:
a) 5p   c) 20p
b) 95p   d) 80p?

5 What fraction of 1 km is:
a) 50 m   c) 25 m
b) 650 m   d) 175 m?

6 Julia has £48. She spends £18. What fraction of her money is left?

7 A bottle of lemonade holds 1 litre. 350 ml is used. What fraction is left?

8 A bag holds 75 kg of potatoes. 45 kg is used. What fraction is left?

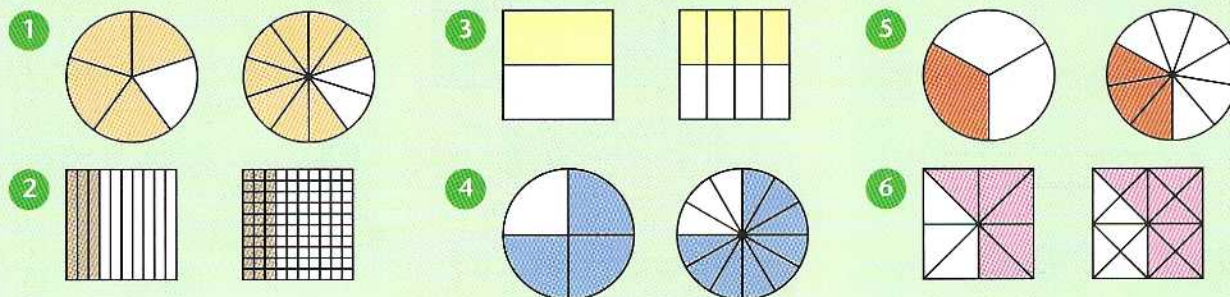**TARGET** To use common multiples to find equivalent fractions and common factors to simplify fractions.

Examples A fraction can be changed to an equivalent fraction by:

cancelling using
common factors
$\dfrac{\cancel{18}}{\cancel{30}}\dfrac{3}{5}$

multiplying using
common multiples.
$\dfrac{2}{3}\dfrac{(\times 5)}{(\times 5)} = \dfrac{10}{15}$

A

Write the equivalent fractions shown by the shaded area in each pair of diagrams.

❶
❷
❸
❹
❺
❻

B

Continue these fraction chains for five further terms.

❶ $\dfrac{1}{4} = \dfrac{2}{8} = \dfrac{3}{12}$

❷ $\dfrac{2}{3} = \dfrac{4}{6} = \dfrac{6}{9}$

❸ $\dfrac{1}{6} = \dfrac{2}{12} = \dfrac{3}{18}$

❹ $\dfrac{3}{10} = \dfrac{6}{20} = \dfrac{9}{30}$

❺ $\dfrac{5}{12} = \dfrac{10}{24} = \dfrac{15}{36}$

Copy and complete these equivalent fractions.

❻ $\dfrac{2}{3} = \dfrac{8}{\square}$

❼ $\dfrac{3}{4} = \dfrac{15}{\square}$

❽ $\dfrac{3}{7} = \dfrac{6}{\square}$

❾ $\dfrac{5}{6} = \dfrac{15}{\square}$

❿ $\dfrac{7}{8} = \dfrac{42}{\square}$

⓫ $\dfrac{2}{5} = \dfrac{\square}{100}$

⓬ $\dfrac{4}{9} = \dfrac{\square}{36}$

⓭ $\dfrac{8}{25} = \dfrac{\square}{200}$

⓮ $\dfrac{7}{12} = \dfrac{\square}{60}$

⓯ $\dfrac{3}{4} = \dfrac{\square}{100}$

Simplify each fraction by cancelling.

⓰ $\dfrac{12}{14}$

⓱ $\dfrac{15}{25}$

⓲ $\dfrac{44}{48}$

⓳ $\dfrac{35}{100}$

⓴ $\dfrac{16}{24}$

㉑ $\dfrac{25}{30}$

㉒ $\dfrac{750}{1000}$

㉓ $\dfrac{12}{16}$

㉔ $\dfrac{9}{24}$

㉕ $\dfrac{68}{100}$

C

Pick out the letters above the fractions equivalent to the fraction in the brackets.
Rearrange these letters to find a European capital city.

❶
D	I	S	E	N	O	L	R	M	B
$\frac{12}{15}$	$\frac{9}{12}$	$\frac{4}{6}$	$\frac{27}{36}$	$\frac{15}{20}$	$\frac{60}{100}$	$\frac{21}{28}$	$\frac{6}{8}$	$\frac{10}{15}$	$\frac{12}{16}$
$\left(\frac{3}{4}\right)$

❸
A	E	M	G	N	D	I	N	R	V
$\frac{8}{20}$	$\frac{14}{35}$	$\frac{12}{25}$	$\frac{20}{60}$	$\frac{4}{10}$	$\frac{15}{40}$	$\frac{10}{25}$	$\frac{18}{45}$	$\frac{25}{80}$	$\frac{6}{15}$
$\left(\frac{2}{5}\right)$

❷
A	T	S	P	N	A	W	I	R	W
$\frac{4}{8}$	$\frac{12}{20}$	$\frac{7}{14}$	$\frac{20}{50}$	$\frac{8}{15}$	$\frac{3}{6}$	$\frac{50}{100}$	$\frac{6}{10}$	$\frac{15}{30}$	$\frac{9}{18}$
$\left(\frac{1}{2}\right)$

❹
S	A	L	I	N	P	E	T	R	H
$\frac{25}{30}$	$\frac{10}{12}$	$\frac{40}{45}$	$\frac{50}{54}$	$\frac{20}{24}$	$\frac{45}{50}$	$\frac{75}{90}$	$\frac{15}{18}$	$\frac{25}{36}$	$\frac{35}{42}$
$\left(\frac{5}{6}\right)$

❺ Now make up a similar problem of your own.

A

| 1 | $\frac{4}{5}$ $\frac{8}{10}$ | 3 $\frac{1}{2}$ $\frac{4}{8}$ | 5 $\frac{1}{3}$ $\frac{3}{9}$ |
| 2 | $\frac{3}{10}$ $\frac{30}{100}$ | 4 $\frac{3}{4}$ $\frac{9}{12}$ | 6 $\frac{5}{8}$ $\frac{10}{16}$ |

B

1 $\frac{4}{16} = \frac{5}{20} = \frac{6}{24} = \frac{7}{28} = \frac{8}{32}$ 6 $\frac{8}{12}$

2 $\frac{8}{12} = \frac{10}{15} = \frac{12}{18} = \frac{14}{21} = \frac{16}{24}$ 7 $\frac{15}{20}$

3 $\frac{4}{24} = \frac{5}{30} = \frac{6}{36} = \frac{7}{42} = \frac{8}{48}$ 8 $\frac{6}{14}$

4 $\frac{12}{40} = \frac{15}{50} = \frac{18}{60} = \frac{21}{70} = \frac{24}{80}$ 9 $\frac{15}{18}$

5 $\frac{20}{48} = \frac{25}{60} = \frac{30}{72} = \frac{35}{84} = \frac{40}{96}$ 10 $\frac{42}{48}$

11 $\frac{40}{100}$	14 $\frac{35}{60}$	17 $\frac{3}{5}$	20 $\frac{2}{3}$	23 $\frac{3}{4}$
12 $\frac{20}{36}$	15 $\frac{75}{100}$	18 $\frac{11}{12}$	21 $\frac{5}{6}$	24 $\frac{3}{8}$
13 $\frac{54}{200}$	16 $\frac{6}{7}$	19 $\frac{7}{20}$	22 $\frac{3}{4}$	25 $\frac{17}{25}$

C

| 1 BERLIN | 2 WARSAW | 3 VIENNA | 4 ATHENS |

A

1 a) $\frac{40}{100}$ $\frac{10}{40}$ $\frac{3}{7}$	2 $\frac{5}{8}$	6 >	10 <
b) $\frac{25}{50}$ $\frac{4}{8}$	3 $\frac{2}{5}$	7 <	11 >
c) $\frac{4}{6}$ $\frac{8}{14}$	4 $\frac{3}{4}$	8 <	12 <
d) $\frac{13}{12}$ $\frac{19}{16}$ $\frac{25}{20}$	5 $\frac{1}{3}$	9 >	13 >

B

1 <	5 <	9 $\frac{7}{12}$, $\frac{2}{3}$, $\frac{3}{4}$
2 >	6 >	10 $\frac{1}{2}$, $\frac{11}{20}$, $\frac{6}{10}$
3 >	7 >	11 $\frac{1}{6}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{5}{12}$
4 <	8 <	12 $\frac{1}{2}$, $\frac{8}{15}$, $\frac{3}{5}$, $\frac{2}{3}$

13 $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{3}{2}$	17 $\frac{3}{10}$	21 $\frac{11}{12}$
14 $\frac{7}{10}$, $\frac{74}{100}$, $\frac{4}{5}$, $\frac{5}{4}$	18 $\frac{5}{16}$	22 $\frac{17}{24}$
15 $\frac{17}{12}$, $\frac{9}{6}$, $\frac{5}{3}$, $\frac{7}{4}$	19 $\frac{5}{12}$	23 $\frac{19}{16}$
16 $\frac{13}{10}$, $\frac{7}{5}$, $\frac{145}{100}$, $\frac{3}{2}$	20 $\frac{3}{4}$	24 $\frac{33}{20}$

C

1 $\frac{1}{5}$, $\frac{1}{4}$, $\frac{2}{7}$, $\frac{2}{6}$	5 $\frac{10}{7}$, $\frac{3}{2}$, $\frac{25}{16}$, $\frac{7}{4}$	9 $\frac{9}{40}$	13 $\frac{5}{4}$	17 <
2 $\frac{7}{12}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{7}{8}$	6 $\frac{5}{4}$, $\frac{11}{8}$, $\frac{13}{9}$, $\frac{9}{6}$	10 $\frac{4}{9}$	14 $\frac{19}{12}$	18 >
3 $\frac{2}{9}$, $\frac{1}{4}$, $\frac{3}{10}$, $\frac{2}{5}$	7 $\frac{17}{10}$, $\frac{7}{4}$, $\frac{9}{5}$, $\frac{15}{8}$	11 $\frac{13}{8}$	15 $\frac{15}{56}$	19 =
4 $\frac{2}{3}$, $\frac{4}{5}$, $\frac{5}{6}$, $\frac{11}{12}$	8 $\frac{14}{9}$, $\frac{19}{12}$, $\frac{13}{8}$, $\frac{5}{3}$	12 $\frac{27}{20}$	16 $\frac{91}{48}$	20 <

A

1 $\frac{5}{9}$	5 $1\frac{2}{5}$	9 $\frac{3}{5}$	13 $1\frac{3}{7}$
2 $\frac{62}{100}$	6 $1\frac{2}{12}$	10 $\frac{6}{8}$	14 $1\frac{2}{4}$
3 $\frac{2}{4}$	7 $\frac{2}{6}$	11 $\frac{87}{100}$	15 $\frac{2}{3}$
4 $\frac{2}{8}$	8 $\frac{6}{10}$	12 $\frac{2}{9}$	16 $\frac{6}{11}$

B

1 $\frac{7}{8}$	5 $4\frac{5}{7}$	9 $\frac{9}{10}$	13 $7\frac{11}{50}$
2 $\frac{1}{12}$	6 $4\frac{6}{11}$	10 $1\frac{1}{6}$	14 5
3 $\frac{8}{9}$	7 $3\frac{6}{25}$	11 $\frac{5}{8}$	15 $2\frac{1}{5}$
4 $\frac{1}{10}$	8 $3\frac{8}{9}$	12 $\frac{1}{2}$	16 $2\frac{2}{3}$

A

1 29
2 23
3 340
4 £4550
5 1·12 m

B

1 53
2 96
3 £32·40
4 Saturday 7567, Sunday 5688
5 148.72 km

C

1 £5547·60
2 2220 miles
3 273
4 30·4 cm²
5 £835

A

1 £14·25
2 £1·65
3 3717
4 0·37 litres
5 90 cm

B

1 £4·61
2 60 g
3 25·99 m
4 46·8 litres
5 7·2°C
6 7

C

1 245 cm²
2 48·75 m
3 36
4 £6·26
5 9·25 litres
6 396 kg

A

1 $\frac{3}{6}$ $\frac{1}{2}$ 3 $\frac{8}{10}$ $\frac{4}{5}$ 5 $\frac{1}{2}$ 7 $\frac{3}{4}$ 9 $\frac{2}{3}$

2 $\frac{6}{8}$ $\frac{3}{4}$ 4 $\frac{4}{12}$ $\frac{1}{3}$ 6 $\frac{1}{3}$ 8 $\frac{2}{5}$ 10 $\frac{1}{2}$

B

1 $\frac{1}{5}$ 5 $\frac{2}{3}$ 9 $\frac{4}{5}$ 13 $\frac{1}{4}$ 17 $\frac{5}{6}$

2 $\frac{3}{4}$ 6 $\frac{5}{6}$ 10 $\frac{1}{3}$ 14 $\frac{7}{10}$ 18 $\frac{4}{5}$

3 $\frac{1}{4}$ 7 $\frac{2}{5}$ 11 $\frac{2}{5}$ 15 $\frac{2}{3}$ 19 $\frac{1}{3}$

4 $\frac{1}{2}$ 8 $\frac{1}{3}$ 12 $\frac{2}{3}$ 16 $\frac{3}{4}$ 20 $\frac{2}{3}$

C

1 $\frac{1}{4}$ 7 $\frac{3}{5}$ 13 $\frac{5}{6}$ 19 $\frac{7}{8}$ 25 >

2 $\frac{3}{10}$ 8 $\frac{11}{25}$ 14 $\frac{7}{12}$ 20 $\frac{4}{9}$ 26 <

3 $\frac{3}{4}$ 9 $\frac{2}{3}$ 15 $\frac{3}{5}$ 21 <   27 >

4 $\frac{1}{3}$ 10 $\frac{5}{9}$ 16 $\frac{7}{10}$ 22 =   28 =

5 $\frac{17}{20}$ 11 $\frac{2}{5}$ 17 $\frac{5}{16}$ 23 >

6 $\frac{7}{8}$ 12 $\frac{4}{5}$ 18 $\frac{2}{3}$ 24 <

A

1 $\frac{1}{2}$ 4 $\frac{1}{4}$ 7 $\frac{1}{6}$ 10 $\frac{2}{3}$ 13 $\frac{2}{3}$

2 $\frac{1}{4}$ 5 $\frac{1}{5}$ 8 $\frac{1}{3}$ 11 $\frac{3}{4}$ 14 $\frac{3}{4}$

3 $\frac{1}{3}$ 6 $\frac{3}{5}$ 9 $\frac{1}{4}$ 12 $\frac{1}{2}$

B

1 a) $\frac{1}{8}$ b) $\frac{3}{8}$ c) $\frac{1}{3}$ d) $\frac{2}{3}$

2 a) $\frac{1}{5}$ b) $\frac{4}{5}$ c) $\frac{1}{6}$ d) $\frac{5}{6}$

3 $\frac{1}{4}$ 7 $\frac{9}{10}$ 11 $\frac{1}{2}$ 15 $\frac{3}{5}$

4 $\frac{2}{3}$ 8 $\frac{1}{3}$ 12 $\frac{5}{6}$ 16 $\frac{7}{10}$

5 $\frac{1}{2}$ 9 $\frac{1}{8}$ 13 $\frac{3}{4}$ 17 $\frac{3}{10}$

6 $\frac{2}{5}$ 10 $\frac{2}{3}$ 14 $\frac{3}{4}$ 18 $\frac{4}{5}$

C

1 a) $\frac{1}{10}$ 2 a) $\frac{1}{10}$ 3 a) $\frac{1}{5}$ 4 a) $\frac{1}{20}$ 5 a) $\frac{1}{20}$ 6 $\frac{5}{8}$

b) $\frac{7}{10}$ b) $\frac{1}{20}$ b) $\frac{1}{9}$ b) $\frac{19}{20}$ b) $\frac{13}{20}$ 7 $\frac{13}{20}$

c) $\frac{1}{4}$ c) $\frac{1}{8}$ c) $\frac{3}{5}$ c) $\frac{1}{5}$ c) $\frac{1}{40}$ 8 $\frac{2}{5}$

d) $\frac{3}{4}$ d) $\frac{5}{8}$ d) $\frac{4}{9}$ d) $\frac{4}{5}$ d) $\frac{7}{40}$