1

[2017]

$$\frac{4}{6} + \frac{3}{6} =$$

$$\frac{4}{6} + \frac{3}{6} = \frac{7}{6}$$

[SAME DENOMINATOR]

$$\frac{7}{6}$$

[1 mark]

2

[2016S]

$$\frac{4}{5} - \frac{1}{5} =$$

$$\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$

SAME DENOMINATOR

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

[1 mark]

3

[New]

Tick (✓) **two** cards that give a **total** of $\frac{1}{2}$

| $\frac{3}{10}$ | $\frac{1}{6}$ | $\frac{3}{8}$ ✓ | $\frac{1}{10}$ | $\frac{1}{8}$ ✓ | $\frac{3}{6}$ |

$$\frac{3}{8} + \frac{1}{8} = \frac{4}{8} \left(= \frac{1}{2} \right)$$

[1 mark]

4 [2017]

$$\frac{62}{100} - \frac{36}{100} =$$

$$\frac{62}{100} - \frac{36}{100} = \frac{26}{100} = \frac{13}{50}$$

$\underbrace{}$ SAME DENOMINATOR

$$\boxed{\frac{13}{50}}$$

[1 mark]

5 [2017]

$$\frac{3}{4} - \frac{3}{8} =$$

$$\frac{3}{4} - \frac{3}{8} = \frac{6}{8} - \frac{3}{8} = \frac{3}{8}$$

$\underbrace{}$ SAME DENOMINATOR

$$\boxed{\frac{3}{8}}$$

[1 mark]

6 [2016]

$$\frac{3}{10} - \frac{1}{20} =$$

$$\frac{3}{10} - \frac{1}{20} = \frac{6}{20} - \frac{1}{20} = \frac{5}{20}$$

$\underbrace{}$ SAME DENOMINATOR $= \frac{1}{4}$

$$\boxed{\frac{1}{4}}$$

[1 mark]

7 [2017]

$$\frac{2}{6} - \frac{1}{8} =$$

$$\frac{2}{6} - \frac{1}{8} = \frac{8}{24} - \frac{3}{24} = \frac{5}{24}$$

SAME DENOMINATOR

$$\boxed{\frac{5}{24}}$$

[1 mark]

8 [2016S]

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

$$\frac{3}{4} + \frac{2}{5} = \frac{15}{20} + \frac{8}{20} = \frac{23}{20}$$

SAME DENOMINATOR $= 1\frac{3}{20}$

$$\boxed{1\frac{3}{20}}$$

[1 mark]

9 [2017]

$$\frac{1}{4} + \frac{1}{5} + \frac{1}{10} =$$

$$\frac{1}{4} + \frac{1}{5} + \frac{1}{10} = \frac{5}{20} + \frac{4}{20} + \frac{2}{20} = \frac{11}{20}$$

SAME DENOMINATOR

$$\boxed{\frac{11}{20}}$$

[1 mark]

10

[2017]

$2\dfrac{1}{3} + \dfrac{5}{6} =$

✱ [NOTE THAT I CHANGE MIXED NUMBERS INTO IMPROPER FRACTIONS BEFORE I ADD, SUBTRACT, MULTIPLY, DIVIDE]

$$\dfrac{7}{3} + \dfrac{5}{6} = \dfrac{14}{6} + \dfrac{5}{6} = \dfrac{19}{6}$$

SAME DENOMINATOR

$= 3\dfrac{1}{6}$

$\boxed{3\dfrac{1}{6}}$

[1 mark]

11

[2016]

$1\dfrac{4}{5} + \dfrac{3}{10} =$

$$\dfrac{9}{5} + \dfrac{3}{10} = \dfrac{18}{10} + \dfrac{3}{10} = \dfrac{21}{10}$$

SAME DENOMINATOR

$= 2\dfrac{1}{10}$

$\boxed{2\dfrac{1}{10}}$

[1 mark]

12

[2016S]

$1\dfrac{1}{5} - \dfrac{1}{4} =$

$$\dfrac{6}{5} - \dfrac{1}{4} = \dfrac{24}{20} - \dfrac{5}{20} = \dfrac{19}{20}$$

SAME DENOMINATOR

$\boxed{\dfrac{19}{20}}$

[1 mark]

13 $1\frac{1}{4} - \frac{1}{3} =$

[2016]

$$\frac{5}{4} - \frac{1}{3} = \frac{15}{12} - \frac{4}{12} = \frac{11}{12}$$

$\underbrace{\phantom{\frac{15}{12} - \frac{4}{12}}}$
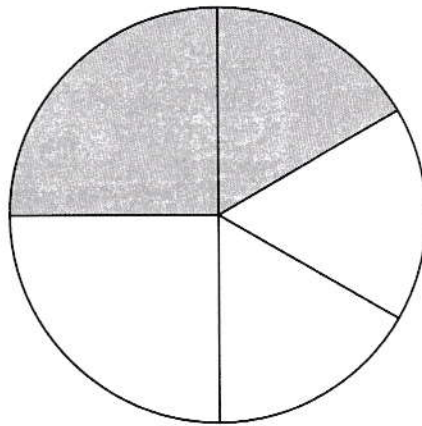SAME
DENOMINATOR

$\boxed{\dfrac{11}{12}}$

[1 mark]

14 In this circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.

[2017]

What fraction of the whole circle is **not** shaded?

$$\frac{1}{4} + \frac{1}{6} = \frac{3}{12} + \frac{2}{12} = \frac{5}{12} \text{ (SHADED)}$$
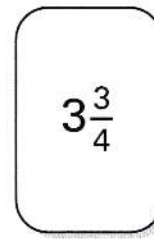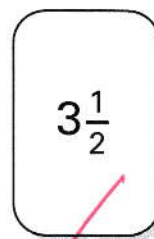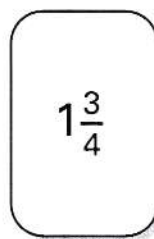
$\underbrace{\phantom{\frac{3}{12} + \frac{2}{12}}}$
SAME
DENOMINATOR

$\boxed{\dfrac{7}{12}}$

(NOT SHADED)

[2 marks]

15 Tick (✓) **two** cards that give a **total of 5**.

[2002]

| $1\frac{1}{4}$ | $1\frac{1}{2}$ ✓ | $1\frac{3}{4}$ | $3\frac{1}{2}$ ✓ | $3\frac{3}{4}$ |

OR $1\frac{1}{4} + 3\frac{3}{4}$

[1 mark]

16 This square is divided into three parts.

[2002]

Part **A** is $\frac{1}{3}$ of the area of the square.

Part **B** is $\frac{2}{5}$ of the area of the square.

What fraction of the area of the square is part **C**?

$$\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15} \quad (A+B)$$
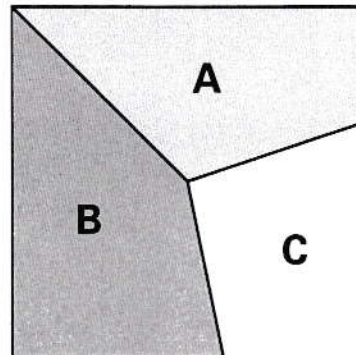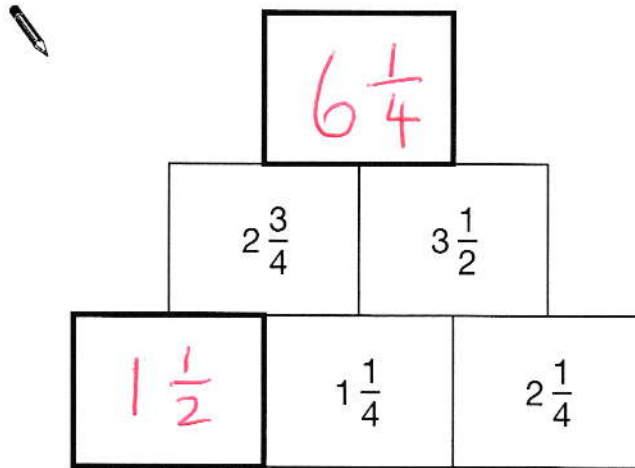
SAME DENOMINATOR

$\frac{4}{15}$ [PART C]

[2 marks]

17

[2014]

In this diagram, the number in each box is the **sum** of the two numbers below it.
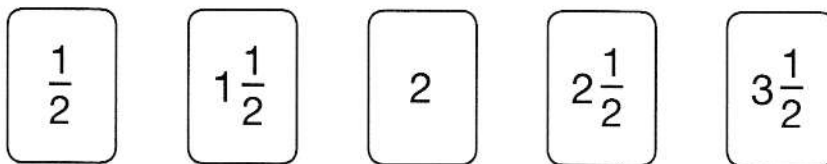
Write the missing numbers.

$$6\frac{1}{4}$$

$$2\frac{3}{4} \qquad 3\frac{1}{2}$$

$$1\frac{1}{2} \qquad 1\frac{1}{4} \qquad 2\frac{1}{4}$$

[2 marks]

18

[2010]

Here are five number cards.

$$\frac{1}{2} \qquad 1\frac{1}{2} \qquad 2 \qquad 2\frac{1}{2} \qquad 3\frac{1}{2}$$

Use **three** of the number cards to make this calculation correct.

$$\left(1\frac{1}{2} + 3\frac{1}{2} \right) \times 2 = 10$$

[1 mark]

19 [2000]

$\dfrac{3}{4}$ of 840 =

$\dfrac{1}{4} \times 840 = 210$

so $\dfrac{3}{4} \times 840 = \underline{\underline{630}}$

630

[1 mark]

20 [2003]

$\dfrac{2}{3}$ of 960 =

$\dfrac{1}{3} \times 960 = 320$

So $\dfrac{2}{3} \times 960 = \underline{\underline{640}}$

640

[1 mark]

21 [2006]

$\dfrac{2}{3}$ of £180 =

$\dfrac{1}{3} \times 180 = 60$

So, $\dfrac{2}{3} \times 180 = \underline{\underline{120}}$

£120

[1 mark]

22

[2001]

Match each box to the correct number.

One has been done for you.

45

40

$\frac{1}{2}$ of 30

35

$\frac{1}{3}$ of 75

30

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

25

20

15

[1 mark]

23

[2003]

Three-quarters of a number is **48**

What is the number?

$\frac{3}{4}$ is 48, so $\frac{1}{4}$ is 16

$\rightarrow \frac{4}{4} = \underline{64}$

64

[1 mark]

24

[2016S]

$\frac{1}{4} \times \frac{1}{8} =$

$\frac{1}{4} \times \frac{1}{8} = \frac{1 \times 1}{4 \times 8}$

$= \frac{1}{32}$

$\frac{1}{32}$

[1 mark]

25 $\dfrac{4}{6} \times \dfrac{3}{5} =$

[2017]

$$\frac{4}{6} \times \frac{3}{5} = \frac{4 \times 3}{6 \times 5}$$

$$= \frac{12}{30} \quad \left(= \frac{2}{5}\right)$$

$$\boxed{\dfrac{2}{5}}$$

[1 mark]

26 $\dfrac{4}{5} \div 4 =$

[2017]

$$\frac{4}{5} \times \frac{1}{4} = \frac{4 \times 1}{5 \times 4}$$

$$= \frac{4}{20} \quad \left(= \frac{1}{5}\right)$$

$$\boxed{\dfrac{1}{5}}$$

[1 mark]

27 $\dfrac{3}{5} \div 3 =$

[2016]

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

$$= \frac{3}{15} \quad \left(= \frac{1}{5}\right)$$

$$\boxed{\dfrac{1}{5}}$$

[1 mark]

28 [2017]

$$\frac{5}{8} \div 2 =$$

$$\frac{5}{8} \times \frac{1}{2} = \frac{5 \times 1}{8 \times 2}$$

$$= \frac{5}{16}$$

$$\boxed{\frac{5}{16}}$$

[1 mark]

29 [2016]

$$\frac{2}{5} \times 140 =$$

$$\left[\text{OR DO } \frac{1}{5} \times 140 = 28, \text{ so } \frac{2}{5} \times 140 = 56 \right]$$

$$\frac{2}{5} \times 140 = \frac{280}{5}$$

$$= 56$$

$$\boxed{56}$$

[1 mark]

30 [2016S]

$$17 \times 1\frac{1}{2} =$$

$$\left[\text{OR DO } 1 \times 17 + \frac{1}{2} \times 17 \right]$$

$$17 \times \frac{3}{2} = \frac{51}{2}$$

$$= 25\frac{1}{2}$$

$$\boxed{25\frac{1}{2}}$$

[1 mark]

31

[2017]

$1\frac{1}{2} \times 57 =$ [OR DO $1 \times 57 + \frac{1}{2} \times 57$]

$\frac{3}{2} \times 57 = \frac{171}{2}$

$= 85\frac{1}{2}$

$85\frac{1}{2}$

[1 mark]

32

[2002]
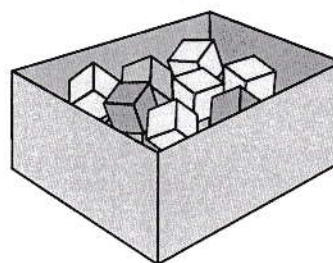
There are 24 coloured cubes in a box.

Three-quarters of the cubes are red,
four of the cubes are blue
and the rest are green.

How many **green** cubes are in the box?

$\frac{3}{4} \times 24 = 18$ (RED)

4 (BLUE

TOTAL $\underline{22}$ $\longrightarrow$ 2 GREEN

One more **blue** cube is put into the box. $\longrightarrow$ 5 BLUE, 25 CUBES!

What fraction of the cubes in the box are **blue** now?

$\frac{5}{25} = \frac{1}{5}$

$\frac{1}{5}$

[2 marks]