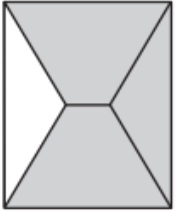


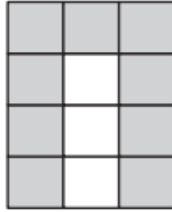
iRAT / tRAT : Fractions and Ratios

Question 1

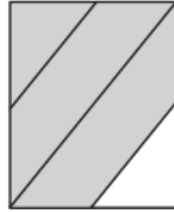
Which rectangle is three-quarters shaded?



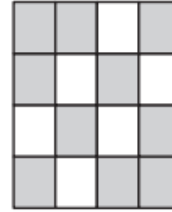
A



B



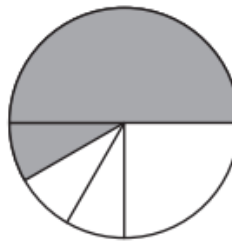
C



D

Question 2

What fraction of this circle is shaded?



$\frac{2}{5}$

A

$\frac{2}{3}$

B

$\frac{7}{12}$

C

$\frac{3}{5}$

D

Question 3



The fraction of this bar that has been shaded is

$\frac{1}{3}$

A

$\frac{1}{4}$

B

$\frac{1}{5}$

C

$\frac{1}{6}$

D

Question 4

The coach of a netball team cuts 5 oranges into quarters and puts them in a bucket. During a break in the game, each of the 7 team members eats half an orange. How many quarter-oranges are left in the bucket after the break in the game?

A 6

B 7

C 10

D 13

Question 5

There are 105 students at a country school.
75 of them live on farms and the rest live in the town.
What fraction of the students live on farms?

- | | | | |
|---------------|---------------|---------------|----------------|
| $\frac{2}{3}$ | $\frac{3}{5}$ | $\frac{5}{7}$ | $\frac{7}{10}$ |
| A | B | C | D |

Question 6

On average, grey seals sleep for 6.2 hours each day.
The fraction of each day an average grey seal spends **awake** is closest to

- | | | | |
|---|-------------|---|----------------|
| A | One sixth | B | Two thirds |
| C | One quarter | D | Three quarters |

Question 7

A marketing company asked 20 people which mobile phone they owned.
Six people said they owned an iPhone.
What fraction of the people owned an iPhone?

- | | | | |
|---------------|---------------|----------------|---------------|
| $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{3}{10}$ | $\frac{3}{5}$ |
| A | B | C | D |

Question 8

A childcare centre has a ratio of 5 babies to 1 teacher.
When a new law is introduced, they must change to a ratio of 4 babies to 1 teacher.
How many extra teachers will be needed by a childcare centre that cares for 60 babies?

- | | | | | | | | |
|---|---|---|---|---|----|---|----|
| A | 2 | B | 3 | C | 12 | D | 15 |
|---|---|---|---|---|----|---|----|

Question 9

A test consists of 60 questions. It is structured so that each part of the English course is tested.

Comprehension: 24

Vocabulary: 9

Spelling: 12

Writing: 7

Grammar: 8

What is the ratio of Comprehension questions to Grammar questions?

A 3 : 1

B 4 : 1

C 1 : 3

D 1 : 4

Question 10

I counted the jelly beans in a small packet and found 6 white, 7 red, 4 yellow and 3 black jelly beans.

What is the ratio of the black jelly beans to the yellow jelly beans?

A 1 : 4

B 3 : 4

C 3 : 17

D 3 : 20

Question 11

There are 26 students in Mrs Block's mathematics class: 14 girls and 12 boys.

6 students were late to class.

If 5 of the students late to class were boys, what is the ratio of Girls to Boys that were on time?

A 14 : 12

B 5 : 1

C 9 : 11

D 13 : 7

Question 12

Toby loves making models of buildings, especially skyscrapers. He is very proud of his model of a tower that measures 25 cm. His friend Harry has dared him to make a larger model of the same building so that the ratio of the new model to the old model is 3:2.

How tall will the new model be?

- A 30cm B 32.5cm C 37.5cm D 40cm

Question 13

A container contains green and yellow marbles. The ratio of green marbles to yellow marbles is 4:7. If there are 44 marbles in the container, how many yellow marbles are there?

- A 16 B 28 C 7 D 11

Question 14

Tyler painted a pattern of which a third is blue, and a fifth is red, and a quarter is yellow. On his painting, what is the ratio of blue paint to yellow paint?

- A 4:3 B 3:4 C 5:3 D 3:5

Question 15

What is the ratio of the volume of a cube of side length 2 cm to the volume of a cube of side length 4 cm?

- A 1:2 B 2:1 C 1:4 D 1:8