

Name:

## Exam Style Questions

**Simplifying Fractions**

**Equivalent Fractions**

**Fractions of Shapes**

**Expressing as a Fraction**



**Corbettmaths**

Equipment needed: Pen, Pencil, Calculator

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

### Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

**Videos 146, 135, 143, 136**



### Answers and Video Solutions



1. Simplify

Give each answer in its simplest form.



(a)  $\frac{4}{10}$

.....  
(1)

(b)  $\frac{4}{8}$

.....  
(1)

(c)  $\frac{6}{15}$

.....  
(1)

(d)  $\frac{15}{20}$

.....  
(1)

(e)  $\frac{20}{100}$

.....  
(1)

2. Find the missing numbers



(a)

$$\frac{3}{4} = \frac{\square}{16}$$

(1)

(b)

$$\frac{\square}{5} = \frac{6}{15}$$

(1)

(c)

$$\frac{7}{8} = \frac{35}{\square}$$

(1)

(d)

$$\frac{2}{\square} = \frac{16}{40}$$

(1)

(e)

$$\frac{4}{15} = \frac{\square}{60}$$

(1)

(f)

$$\frac{6}{11} = \frac{66}{\square}$$

(1)

3. Here are some fractions.

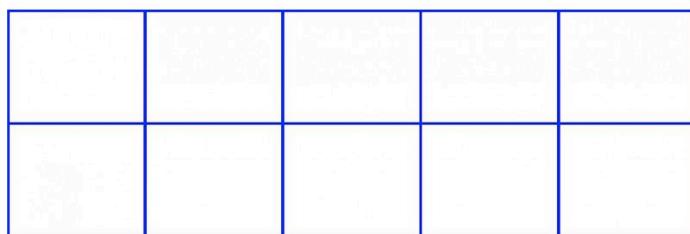


$$\frac{2}{4} \quad \frac{3}{7} \quad \frac{5}{9} \quad \frac{9}{18} \quad \frac{10}{22}$$

Circle the two fractions that are equivalent to  $\frac{1}{2}$

(2)

4. Here is a shape made from 10 squares.



(a) Shade  $\frac{1}{2}$  of the shape.

(1)

(b) Simplify  $\frac{6}{8}$

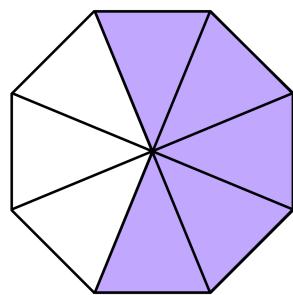
(1)

(c) Circle the fractions that are equivalent to  $\frac{4}{5}$

$$\frac{6}{10} \quad \frac{12}{15} \quad \frac{20}{30} \quad \frac{24}{25} \quad \frac{44}{55}$$

(2)

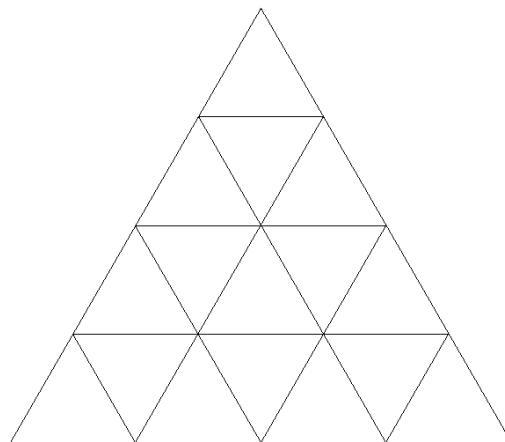
5.



What fraction of the shape is shaded?

.....  
(1)

6. Shown is a triangular grid.



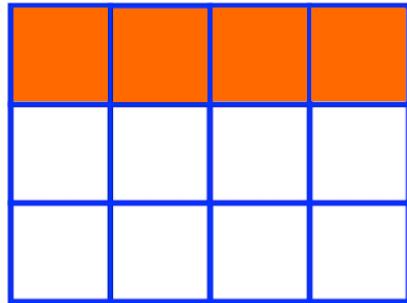
(a) Shade  $\frac{3}{4}$  of the grid.

.....  
(1)

(b) Simplify  $\frac{8}{14}$

.....  
(1)

7.

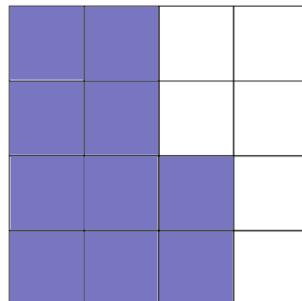


What fraction of this shape is shaded?

Give your answer in its simplest form.

.....  
(2)

8.



What fraction of this shape is **unshaded**?

Give your answer in its simplest form.

.....  
(2)

9. Reuben was asked to simplify fully  $\frac{6}{24}$



He says the answer is  $\frac{3}{12}$

Is Reuben correct?

Explain your answer.

.....

.....

.....

(1)

- 
10. Write 12 out of 16 as a fraction in its simplest form.



.....

(2)

- 
11. In a class there are 12 girls and 18 boys.



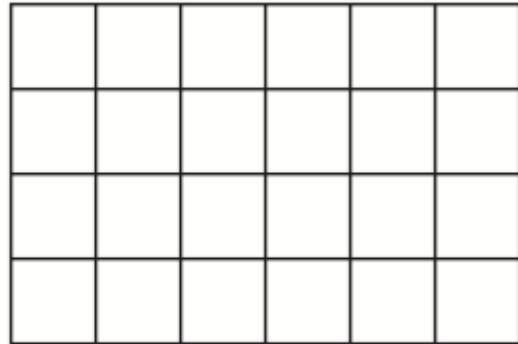
What fraction of the class are girls?

Give your answer in its simplest form.

.....

(2)

12.

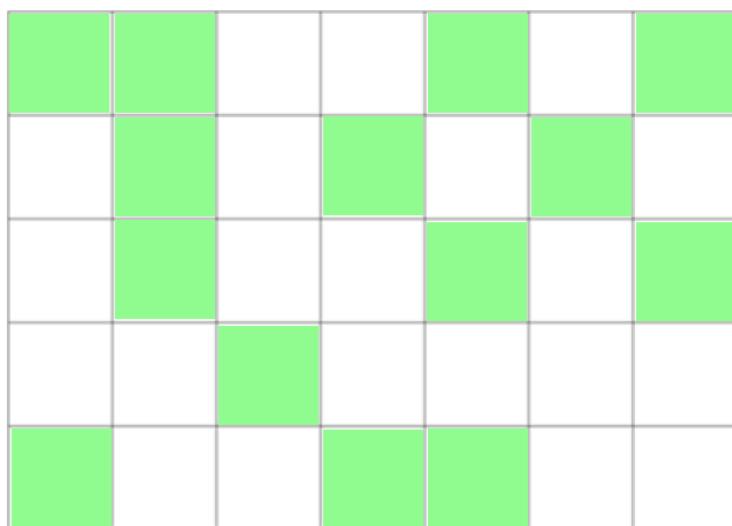


Shade  $\frac{5}{6}$  of the shape.

(1)

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13.



What fraction of this shape is shaded?  
Give your answer in its simplest form.

(2)

14. Explain why  $\frac{6}{8} = \frac{3}{4}$



.....  
.....  
.....

(1)

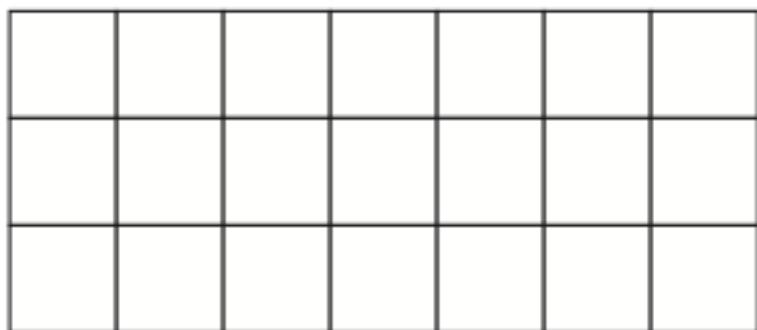
15. Write down three fractions that are equivalent to  $\frac{3}{8}$



.....  
.....

(3)

16.



Shade  $\frac{3}{7}$  of the shape.

(1)

17. Some of the fractions below are equivalent.



Circle the equivalent fractions.

$$\frac{1}{3} \quad \frac{2}{5} \quad \frac{2}{6} \quad \frac{3}{12} \quad \frac{5}{15}$$

(2)

18. Below is a list of fractions.



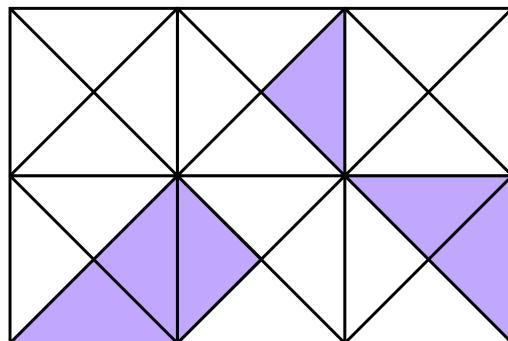
$$\frac{50}{60} \quad \frac{28}{36} \quad \frac{15}{18} \quad \frac{35}{42}$$

One of the fractions is **not** equivalent to  $\frac{5}{6}$

Write down which fraction.

.....  
(2)

19. What fraction of this shape is shaded?



Give your answer in its simplest form.

.....  
**(2)**

20. Write the fraction  $\frac{21}{84}$  in its simplest form.



.....  
**(1)**

21. Write the fraction  $\frac{75}{165}$  in its simplest form.



.....  
**(1)**

22. Write the fraction  $\frac{42}{70}$  in its simplest form.



.....  
(1)

23. Write the fraction  $\frac{864}{924}$  in its simplest form.



.....  
(1)

24. Of 500 people, 100 wear glasses.



Write the number of people who **do not** wear glasses as a fraction of the total number of people.

Give your answer in its simplest form.

.....  
(2)

25. There are 400 pupils in a primary school.  
Of the 400 pupils, 88 play a musical instrument.



Express the number of pupils who play a musical instrument as a fraction of the 400 pupils.

Give your answer in its simplest form.

.....  
(2)

26. Express 50p as a fraction of £4



Give your answer in its simplest form.

.....  
(2)

27. In a bag there are 80 beads.  
There are 35 yellow beads.  
There are 17 red beads.  
The rest of the beads are white.



Work out what fraction of the beads are white.  
Give your answer in its simplest form.

.....  
(2)

28. Last year the cost of a table was £180  
This year the cost of the same table is £210



Write down the increase in cost as a fraction of last year's cost.

.....  
(2)

29. Four students attempt a puzzle.  
Their times taken are shown below.



Student	Time Taken
Abigail	17.5 minutes
Dave	Quarter of an hour
Nia	850 seconds
Patrick	16 minutes

Work out 
$$\frac{\text{shortest time taken}}{\text{longest time taken}}$$

Give your answer in its simplest form.

.....  
(3)

30. Isla is 1.04m tall

 Catherine is 80cm tall

Write Isla's height as a fraction of Catherine's height.

Give your answer in its simplest form.

.....  
**(2)**