

# Fractions

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR and Pearson-Edexcel.

Name:	
Total Marks:	

1. Find  $\frac{1}{4}$  of 16.

.....[1]

......[1]

.....[3]

2. Emma has done some calculations.

Explain how you know the answer is wrong without working out the correct answer.

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

In a box of 12 eggs, 5 are cracked.
What fraction is cracked?

4. Work out.

$$\frac{3}{7} + \frac{4}{5}$$

Give your answer as a mixed number.

5. Find a fraction between  $\frac{1}{4}$  and  $\frac{1}{3}$ 

......[2]

[1]



[1]

6. Jemma has a bag containing 24 balls.

The probability that a ball taken from the bag at random is green is 1/3 How many of the 24 balls are green?

- 7. Circle the fraction that is not equivalent to  $\frac{3}{8}$  $\frac{6}{16} \quad \frac{9}{24} \qquad \frac{12}{32} \qquad \frac{15}{35}$
- 8. Complete the table.

Minutes	Hours	
30	$\frac{1}{2}$	
40		
	$2\frac{1}{4}$	

9. Write 180 g as a fraction of 3 kg

Give your answer in its simplest form.

10. Work out 
$$2\frac{3}{4} \times 1\frac{5}{7}$$

Give your answer as a mixed number in its simplest form.

[2]

[2]

#### 11. Write 0.037 as a fraction.

JustMaths

[1]

12. There are only black pens and green pens in a box.

The ratio of the number of black pens in the box to the number of green pens in the boxis 2 : 5  $\,$ 

What fraction of the pens are black?

......[1]

13. Sam buys 20 boxes of oranges.

There are 25 oranges in each box.

Each boxes of oranges costs £7

Sam sells  $\frac{2}{5}$  of the oranges he bought.

He sells each of these oranges for 40p.

He then sells each of the remaining oranges at 3 oranges for 50p.

Did Sam make a profit or did Sam make a loss?

You must show working to justify your answer.

[5]



#### 15. ABCD is a square.



This diagram is drawn accurately. What fraction of the square ABCD is shaded?

.....[2]

[2]



16. There are 25 boys and 32 girls in a club.

 $\frac{2}{5}$  of the boys and  $\frac{1}{2}$  of the girls walk to the club.

The club leader picks at random a child from the children who walk to the club. Work out the probability that this child is a boy.



### Living to 100 years old

1 in 3 babies born last year are expected to live to 100 years old

720 000 babies were born last year.



How many of these babies are expected to live to 100 years old?

.....[2]

19. There are 35 pens in a box.

15 of the pens are green.

The rest of the pens are red.

What fraction of the pens in the box are red?

......[1]

20. 120 men and 80 women were asked if they drive to work.

Altogether  $\frac{1}{4}$  of the people said yes.

 $\frac{1}{3}$  of the men said yes.

What fraction of the women said yes?

21. In Scotland, squirrels are red or grey in the ratio red : grey = 1 : 2  $\frac{1}{2}$ 

What fraction of the squirrels in Scotland are red?

22. There are 20 students.

12 are boys.

What fraction are boys? Circle your answer.

[4]

[2]

[1]

## JustMaths

[3]

[1]

[2]

# 23. Which of $\frac{2}{5}$ or $\frac{5}{8}$ is closer in value to $\frac{1}{2}$ ?

You must show your working.

### 24. A drink is mixed in the ratio

lemonade : orange : cranberry = 6 : 3 : 2

What fraction is orange?

Circle your answer.

 $\frac{3}{8}$   $\frac{2}{11}$   $\frac{3}{11}$   $\frac{6}{11}$ 

25. Jody's pay is £315 per week.

She works for 37  $\frac{1}{2}$ 

Work out her hourly rate of pay.

### 26. What is one quarter of 5 hours?

Tick a box.



[1]