

Name:

Date:

# Writing, Simplifying, and Ordering Fractions

## GCSE

Edexcel  
Mathematics  
Grade (9-1)

Mark

Score (%)

<hr/> 36
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## Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

## Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

## Information

- The marks for the questions are shown in brackets

1 Write  $\frac{6}{30}$  as a fraction in its simplest form.

$$\frac{6}{30} \div 6 = \frac{1}{5}$$

(Total for question 1 is 1 mark)

2 Write  $\frac{16}{54}$  as a fraction in its simplest form.

$$\frac{16}{54} \div 2 = \frac{8}{27}$$

(Total for question 2 is 1 mark)

3 Write  $\frac{12}{60}$  as a fraction in its simplest form.

$$\frac{12}{60} \div 12 = \frac{1}{5}$$

(Total for question 3 is 1 mark)

4 Write  $\frac{26}{32}$  as a fraction in its simplest form.

$$\frac{26}{32} \div 2 = \frac{13}{16}$$

(Total for question 4 is 1 mark)

5 Write  $\frac{36}{48}$  as a fraction in its simplest form.

$$\frac{36}{48} \div 12 = \frac{3}{4}$$

(Total for question 5 is 1 mark)

6 Write  $\frac{74}{24}$  as a fraction in its simplest form.

$$\frac{74}{24} \div 2 = \frac{37}{12}$$

(Total for question 6 is 1 mark)

7 Write  $\frac{44}{72}$  as a fraction in its simplest form.

$$\frac{44}{72} \div 4 = \frac{11}{18}$$

(Total for question 7 is 1 mark)

8 Here is a list of fractions.

$$\frac{6}{4} \quad \frac{24}{16} \quad \frac{12}{8} \quad \frac{8}{20} \quad \frac{48}{32}$$

One of these fractions is not equivalent to  $\frac{3}{2}$

Write down this fraction.

$$\frac{8}{20}$$

(Total for question 8 is 1 mark)

9 Here is a list of fractions.

$$\frac{4}{8} \quad \frac{14}{30} \quad \frac{2}{4} \quad \frac{8}{16} \quad \frac{24}{48}$$

One of these fractions is not equivalent to  $\frac{1}{2}$

Write down this fraction.

$$\frac{14}{30}$$

(Total for question 9 is 1 mark)

10 Here is a list of fractions.

$$\frac{4}{16} \quad \frac{2}{8} \quad \frac{10}{25} \quad \frac{8}{32} \quad \frac{10}{40}$$

One of these fractions is not equivalent to  $\frac{1}{4}$

Write down this fraction.

$$\frac{10}{25}$$

(Total for question 10 is 1 mark)

11 There are 32 sweets in a bag.

21 of the sweets are pink.  
The rest of the sweets are green.

What fraction of the sweets are pink?

$$\frac{21}{32}$$

(Total for question 11 is 1 mark)

12 There are 22 sweets in a bag.

16 of the sweets are blue.  
The rest of the sweets are white.

What fraction of the sweets are blue?

$$\frac{16}{22} = \frac{8}{11}$$

(Total for question 12 is 1 mark)

13 There are 30 beads in a bag.

18 of the beads are yellow.  
The rest of the beads are red.

What fraction of the beads are red?

$$\frac{18}{30} = \frac{9}{15} = \frac{3}{5}$$

(Total for question 13 is 2 marks)

14 There are 27 counters in a bag.

The table shows the number of counters of each colour.

Colour	Red	Pink	Yellow	White
Number of Counters	9	5	8	5

What fraction of the counters are yellow?

$$\frac{8}{27}$$

(Total for question 14 is 2 marks)

15 Write the following fractions in order of size. Start with the smallest fraction.

$$\frac{11}{20} \quad \frac{3}{10} \quad \frac{1}{5} \quad \frac{3}{4} \quad \frac{1}{2}$$

$\swarrow$        $\swarrow$        $\downarrow$        $\downarrow$   
 $\frac{6}{20}$        $\frac{4}{20}$        $\frac{15}{20}$        $\frac{10}{20}$

$\frac{1}{5}, \frac{3}{10}, \frac{1}{2}, \frac{11}{20}, \frac{3}{4}$

(Total for question 15 is 2 marks)

16 Write the following fractions in order of size. Start with the smallest fraction.

$$\frac{1}{6} \quad \frac{3}{15} \quad \frac{2}{5} \quad \frac{8}{30} \quad \frac{1}{3}$$

$\swarrow$        $\downarrow$        $\swarrow$        $\swarrow$   
 $\frac{5}{30}$        $\frac{6}{30}$        $\frac{12}{30}$        $\frac{10}{30}$

$\frac{1}{6}, \frac{3}{15}, \frac{8}{30}, \frac{1}{3}, \frac{2}{5}$

(Total for question 16 is 2 marks)

17 Write the following fractions in order of size. Start with the smallest fraction.

$$\frac{5}{8} \quad \frac{11}{20} \quad \frac{3}{4} \quad \frac{7}{10} \quad \frac{3}{5}$$

$\swarrow$        $\swarrow$        $\swarrow$        $\swarrow$   
 $\frac{25}{40}$        $\frac{22}{40}$        $\frac{30}{40}$        $\frac{28}{40}$        $\frac{24}{40}$

$\frac{11}{20}, \frac{3}{5}, \frac{5}{8}, \frac{7}{10}, \frac{3}{4}$

(Total for question 17 is 2 marks)

18 Write the following fractions in order of size. Start with the smallest fraction.

$$\frac{7}{15} \quad \frac{4}{24} \quad \frac{8}{3} \quad \frac{1}{5} \quad \frac{16}{30}$$

$\swarrow$        $\downarrow$        $\downarrow$        $\swarrow$        $\rightarrow$   
 $\frac{56}{120}$        $\frac{20}{120}$        $\frac{24}{120}$        $\frac{64}{120}$

Biggest

$\frac{4}{24}, \frac{1}{5}, \frac{7}{15}, \frac{16}{30}, \frac{8}{3}$

(Total for question 18 is 2 marks)

19 Here are two fractions.

$$\frac{9}{4} \quad \frac{4}{3}$$

$$\frac{3}{2} = \frac{18}{12}$$

Work out which of the fractions is closer to  $\frac{3}{2}$

You must show your working.

$$\left. \begin{array}{l} \frac{9}{4} = \frac{27}{12} \\ \frac{4}{3} = \frac{16}{12} \\ \frac{3}{2} = \frac{18}{12} \end{array} \right\} \begin{array}{l} \frac{16}{12} \text{ is closer} \\ \text{to } \frac{18}{12} \text{ than} \\ \frac{27}{12} \\ \therefore \frac{4}{3} \end{array}$$

(Total for question 19 is 3 marks)

20 Here are two fractions.

$$\frac{4}{3} \quad \frac{23}{27}$$

$$1 = \frac{27}{27}$$

Work out which of the fractions is closer to 1.  
You must show your working.

$$\left. \begin{array}{l} \frac{4}{3} = \frac{36}{27} \\ \frac{23}{27} \end{array} \right\} \begin{array}{l} \frac{23}{27} \text{ is closer} \\ \text{to } \frac{27}{27} \text{ than} \\ \frac{36}{27} \\ \therefore \frac{23}{27} \end{array}$$

(Total for question 20 is 3 marks)

21 Here are two fractions.

$$\frac{4}{5} \quad \frac{7}{6}$$

$$1 = \frac{30}{30}$$

Work out which of the fractions is closer to 1.

You must show your working.

$$\left. \begin{aligned} \frac{4}{5} &= \frac{24}{30} \\ \frac{7}{6} &= \frac{35}{30} \end{aligned} \right\} \begin{aligned} \frac{35}{30} &\text{ is closer to } \\ \frac{30}{30} &\text{ than } \frac{24}{30} \\ \therefore &\frac{7}{6} . \end{aligned}$$

(Total for question 21 is 3 marks)

22 Here are two fractions.

$$\frac{3}{10} \quad \frac{5}{7}$$

$$\frac{1}{2} = \frac{35}{70}$$

Work out which of the fractions is closer to  $\frac{1}{2}$   
You must show your working.

$$\left. \begin{aligned} \frac{3}{10} &= \frac{21}{70} \\ \frac{5}{7} &= \frac{50}{70} \end{aligned} \right\} \begin{aligned} &\begin{matrix} 21 & 35 & 50 \\ \underbrace{\hspace{1.5cm}} & \underbrace{\hspace{1.5cm}} \\ 14 & 15 \end{matrix} \\ &\frac{21}{70} \text{ is closer} \\ &\text{to } \frac{35}{70} \text{ than} \\ &\frac{50}{70} \\ \therefore &\frac{3}{10} . \end{aligned}$$

(Total for question 22 is 3 marks)