

## Simplifying and Ordering Fractions Exam Practice



1. Simplify the following fraction:

$$\frac{28}{70}$$

Answer:  $\frac{14}{35}$  (1 mark)

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2. Simplify the following fraction:

$$\frac{12}{66}$$

Answer:  $\frac{2}{11}$  (1 mark)

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3. Simplify the following fraction:

$$\frac{45}{105}$$

Answer:  $\frac{3}{7}$  (1 mark)



4. Simplify the following fraction:

$$\frac{250}{700}$$

$$= \frac{25}{70}$$

Answer:            $\frac{5}{14}$             
(1 mark)

5. Simplify the following fraction:

$$\frac{90}{240}$$

$$= \frac{9}{24}$$

Answer:            $\frac{3}{8}$             
(1 mark)

6. Simplify the following fraction:

$$\frac{320}{7800}$$

$$= \frac{32}{780}$$

$$= \frac{8}{195}$$

Answer:            $\frac{8}{195}$             
(1 mark)



## Ordering Lists of Fractions

7. Write the following fractions in order, starting with the smallest:

$$\frac{1}{2}, \frac{4}{5}, \frac{3}{10}, \frac{5}{15}, \frac{2}{5}$$

LCM = 30

$$\frac{15}{30}, \frac{24}{30}, \frac{9}{30}, \frac{10}{30}, \frac{12}{30}$$

order: 4) 5) 1) 2) 3)

Answer:  $\frac{3}{10}, \frac{5}{15}, \frac{2}{5}, \frac{1}{2}, \frac{4}{5}$   
(2 marks)

8. Write the following fractions in order, starting with the smallest:

$$\frac{1}{6}, \frac{3}{15}, \frac{2}{3}, \frac{2}{20}, \frac{2}{5}$$

LCM = 30

$$\frac{5}{30}, \frac{6}{30}, \frac{20}{30}, \frac{3}{30}, \frac{12}{30}$$

order: 2) 3) 5) 1) 4)

Answer:  $\frac{2}{20}, \frac{1}{6}, \frac{3}{15}, \frac{2}{5}, \frac{2}{3}$   
(2 marks)

9. Write the following fractions in order, starting with the smallest:

$$\frac{20}{35}, \frac{3}{5}, \frac{1}{2}, \frac{2}{7}, \frac{7}{5}$$

LCM = 70

$$\frac{40}{70}, \frac{42}{70}, \frac{35}{70}, \frac{20}{70}, \frac{98}{70}$$

order: 3) 4) 2) 1) 5)

Answer:  $\frac{2}{7}, \frac{1}{2}, \frac{20}{35}, \frac{3}{5}, \frac{7}{5}$   
(2 marks)



10. Write the following fractions in order, starting with the smallest:

$$\frac{1}{4}, \frac{999}{1000}, \frac{18}{12}, \frac{1}{11}, \frac{99}{100}$$

•  $\frac{18}{12}$  is largest. ( $>1$ )

• By inspection,  $\frac{1}{11} < \frac{1}{4} < \frac{99}{100} < \frac{999}{1000}$

(or do  $\frac{99}{100} = \frac{990}{1000}$ )

Answer:  $\frac{1}{11}, \frac{1}{4}, \frac{99}{100}, \frac{999}{1000}$

(2 marks)

11. Write the following fractions in order, starting with the smallest:

$$\frac{1}{1000}, \frac{1}{101}, \frac{1}{99}, \frac{1}{100}$$

(By inspection)

Answer:  $\frac{1}{1000}, \frac{1}{101}, \frac{1}{100}, \frac{1}{99}$

(2 marks)

12. Write the following fractions in order, starting with the smallest:

$$\frac{5}{8}, \frac{3}{5}, \frac{3}{4}, \frac{7}{10}, \frac{1}{3}$$

LCM = 120

$$\frac{75}{120}, \frac{72}{120}, \frac{90}{120}, \frac{84}{120}, \frac{40}{120}$$

order:

$\frac{1}{3}, \frac{3}{5}, \frac{5}{8}, \frac{7}{10}, \frac{3}{4}$

Answer:  $\frac{1}{3}, \frac{3}{5}, \frac{5}{8}, \frac{7}{10}, \frac{3}{4}$

(2 marks)



## Comparing Fractions:

13. Which of these fractions is not equivalent to  $\frac{2}{7}$ ?

$$\frac{6}{21}, \frac{20}{70}, \frac{50}{175}, \frac{27}{63}, \frac{22}{77}$$

*is, is, is, not, is*

Answer:  $\frac{27}{63}$   
(1 mark)

14. Which of these fractions is closest to  $\frac{2}{3}$ ?

$$\frac{3}{5}, \frac{7}{12}, \frac{2}{15}$$

You must show your working.

*LCM = 60*      $\frac{36}{60}, \frac{35}{60}, \frac{8}{60}$      and  $\frac{2}{3} = \frac{40}{60}$

*$\frac{36}{60}$  is closest to  $\frac{40}{60}$*

Answer:  $\frac{3}{5}$   
(2 marks)

15. Which of these fractions is closest to  $\frac{2}{5}$ ?

$$\frac{9}{20}, \frac{6}{16}$$

You must show your working.

*LCM = 80*      $\frac{36}{80}, \frac{30}{80}$      and  $\frac{2}{5} = \frac{32}{80}$

*$\frac{30}{80}$  is closest to  $\frac{32}{80}$*

Answer:  $\frac{6}{16}$   
(2 marks)



16. Find a fraction which lies between  $\frac{1}{3}$  and  $\frac{1}{4}$ .

$$\frac{1}{3} = \frac{4}{12} = \frac{8}{24}, \quad \frac{1}{4} = \frac{3}{12} = \frac{6}{24}$$

$$\frac{7}{24} \text{ lies between } \frac{6}{24}, \frac{8}{24}$$

Answer:  $\frac{7}{24}$   
(2 marks)

17. Find a fraction which lies between  $\frac{3}{8}$  and  $\frac{1}{5}$ .

$$\frac{3}{8} = \frac{15}{40}, \quad \frac{1}{5} = \frac{8}{40}$$

$$\text{Choose } \frac{9}{40} \text{ for example}$$

Answer:  $\frac{9}{40}$   
(2 marks)

18. Find a fraction which lies between exactly half-way between  $\frac{1}{2}$  and  $\frac{1}{3}$ .

$$\frac{1}{2} = \frac{3}{6} = \frac{6}{12}, \quad \frac{1}{3} = \frac{2}{6} = \frac{4}{12}$$

$$\frac{5}{12} \text{ is half-way between } \frac{6}{12}, \frac{4}{12}.$$

Answer:  $\frac{5}{12}$   
(2 marks)



19. Which of these fractions are equivalent to each other?

$$\frac{7}{35}, \frac{4}{52}, \frac{50}{175}, \frac{1}{13}, \frac{2}{25}$$

$$\frac{1}{5}, \frac{1}{13}, \frac{2}{7}, \frac{1}{13}, \frac{2}{25}$$

Answer:  $\frac{4}{52}, \frac{1}{13}$   
(2 marks)

20. Joshua and Simon are given some sweets from a jar.  
Joshua receives  $\frac{3}{5}$  of the sweets, whilst Simon receives  $\frac{2}{7}$ .  
Simon says to Joshua, "I have got more sweets than you".  
Is Simon correct? You must fully explain your answer.

$$\frac{3}{5} = \frac{21}{35}, \quad \frac{2}{7} = \frac{10}{35}$$

$(J) \qquad \qquad (S)$

Joshua has more sweets

Answer: Incorrect.  
(2 marks)

21. Ron the baker orders 200g of salt and 2.5 kg of sugar.  
What fraction of the total weight of the order is made up of salt?

$$2.5 \text{ kg} = 2500 \text{ g}$$
$$\text{Total} = 200 + 2500$$
$$= 2700 \text{ g}$$

Fraction which is salt:  $\frac{200}{2700} = \frac{2}{27}$

Answer:  $\frac{2}{27}$   
(3 marks)