



Deepening Understanding Answer Sheet

YR6 028 Master Comparing and Ordering Fractions by Numerator

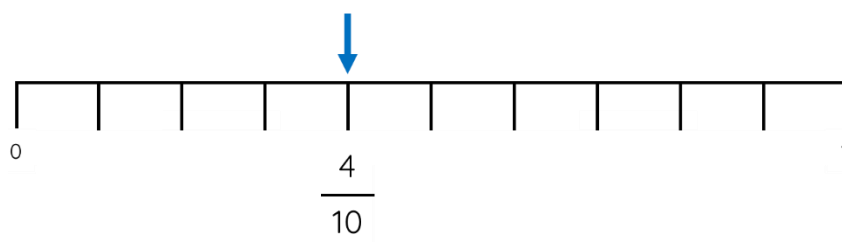
Fluency 1

When the numerators are the same, the **greater** the denominator, the **smaller** the fraction.

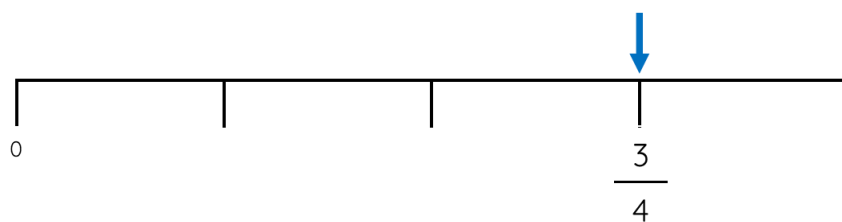
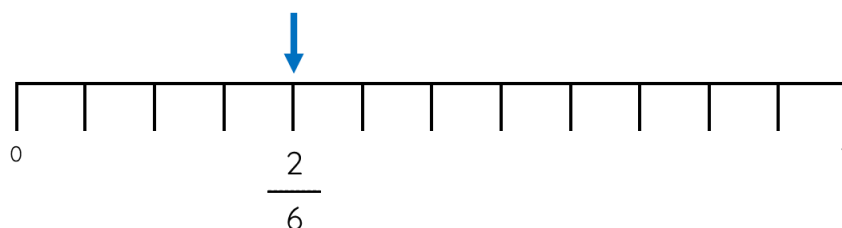
or

When the numerators are the same, the **smaller** the denominator, the **greater** the fraction.

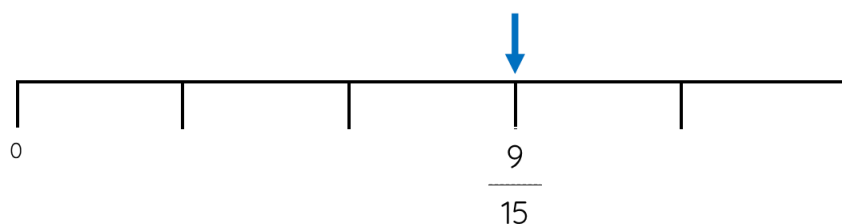
Fluency 2

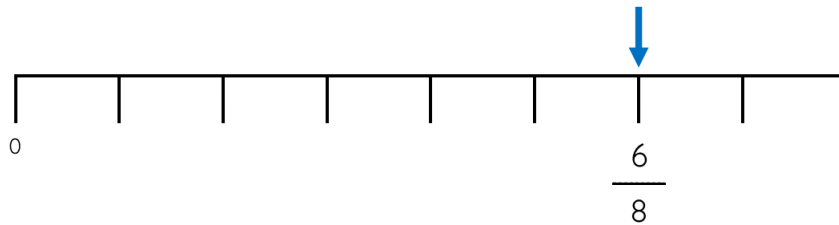
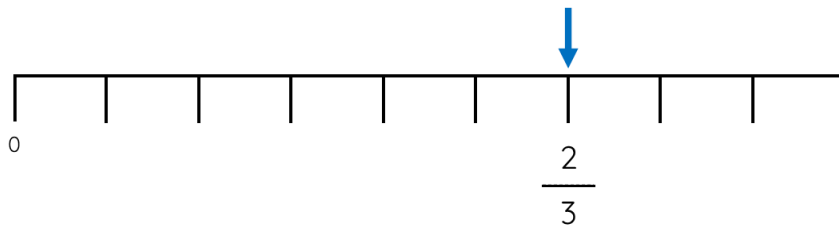


$$\frac{4}{10} > \frac{2}{6}$$



$$\frac{3}{4} > \frac{9}{15}$$





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

Fluency 3

$$\frac{4}{9} < \frac{12}{22} \quad \frac{2}{10} = \frac{6}{30} \quad \frac{5}{6} > \frac{15}{19}$$

$$1\frac{7}{11} < 1\frac{21}{24} \quad 2\frac{32}{35} > 2\frac{8}{9}$$

Fluency 4

smallest $\frac{2}{9}$ $\frac{4}{14}$ $\frac{8}{20}$ greatest

smallest $\frac{3}{10}$ $\frac{6}{16}$ $\frac{12}{20}$ $\frac{18}{24}$ greatest

smallest $2\frac{5}{8}$ $2\frac{20}{28}$ $2\frac{15}{18}$ greatest

Fluency 5

greatest $\frac{12}{20}$ $\frac{6}{14}$ $\frac{3}{8}$ $\frac{4}{15}$ smallest

greatest $\frac{4}{5}$ $\frac{16}{28}$ $\frac{8}{18}$ smallest

greatest $1\frac{28}{30}$ $1\frac{7}{10}$ $1\frac{2}{3}$ $1\frac{4}{7}$ smallest

Fluency 6

Answers will vary.

$\frac{6}{18} < \frac{3}{8}$ $\frac{8}{22} < \frac{16}{40}$

smallest $\frac{12}{33}$ $\frac{4}{7}$ $\frac{24}{36}$ $\frac{8}{10}$ greatest

Reasoning 1

Modelled DAB Reasoning Response

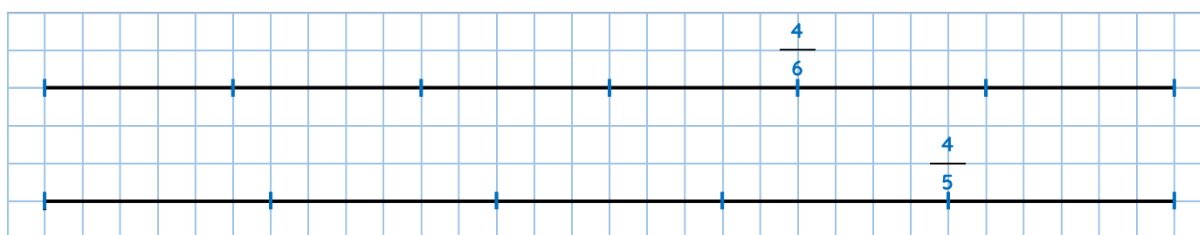
D – Asha is correct.

A – $\frac{2}{3}$ is less than $\frac{4}{5}$

B – To compare these fractions, we can use 4 as a common numerator. Therefore, $\frac{2}{3}$ is equivalent to $\frac{4}{6}$. $\frac{4}{6}$ is less than $\frac{4}{5}$ because when the numerators are the same, the greater the denominator, the smaller the fraction.



This is proven on the number lines below:



Reasoning 2

Modelled DAB Reasoning Response

D – I disagree with Jerry.

A – Finding a common denominator is not the simplest way to compare these fractions.

B – Finding a common numerator is the simplest way to compare these fractions. We only have to convert one fraction because 2 and 6 are multiples of the same number (other than 1). Therefore, the common numerator is 6. $\frac{2}{5}$ is equivalent to $\frac{6}{15}$ and $\frac{6}{15}$ is less than $\frac{6}{13}$

Finding a common denominator is more complex because we have to convert both fractions as the denominators are not multiples the same number (other than 1). As the fractions have denominators of 5 and 13, the lowest common denominator is 65. $\frac{2}{5}$ is equivalent to $\frac{26}{65}$ and $\frac{6}{13}$ is equivalent to $\frac{30}{65}$. $\frac{26}{65}$ is less than $\frac{30}{65}$

Reasoning 3

Modelled DAB Reasoning Response

D – Caleb has made a mistake.

A – The fractions are not ordered in ascending order.

B – $\frac{9}{10}$ and $\frac{27}{33}$ are in the incorrect place. If 9 is used as a common numerator, $\frac{18}{24}$ is equivalent to $\frac{9}{12}$, $\frac{9}{10}$ will not need to be converted and $\frac{27}{33}$ is equivalent to $\frac{9}{11}$.

When the numerators are the same, the greater the denominator, the smaller the fraction. Therefore, in ascending order, the fractions are as follows: $\frac{18}{24}$, $\frac{27}{33}$, $\frac{9}{10}$

Reasoning 4

Modelled DAB Reasoning Response

D – Darcey is correct.

A – There is only 1 possible denominator that could be used to fill the gap.

B – The missing denominator can only be 3.

16 is a common multiple of 2, 4 and 8. Therefore, to order these fractions in descending order, the common numerator is 16.

1 and $\frac{8}{9}$ becomes 1 and $\frac{16}{18}$, 1 and $\frac{16}{20}$ will not need to be converted and 1 and $\frac{4}{7}$ becomes $1\frac{16}{28}$

Using what we now know, we can see that the missing denominator must be between 20 and 28. Also, the numerator (2) must be multiplied by 8 to make 16 and as a result, the denominator must also be multiplied by 8.

The only possible missing denominator is 3 because 3 multiplied by 8 is 24. It cannot be smaller than 3 because this would be a smaller denominator than the previous fraction and it cannot be greater than 3 because this would be a larger denominator than the final fraction.

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<https://www.deepeningunderstanding.co.uk/product/dab-reasoning-posters/>

