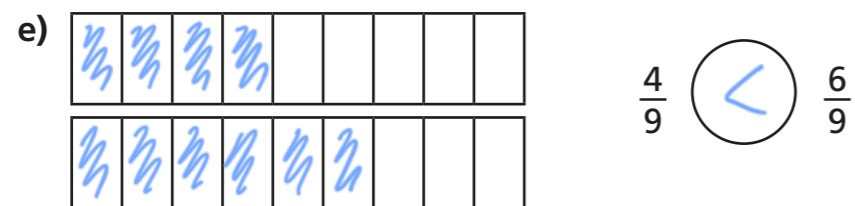# Compare and order (denominator)

1 Write <, > or = to compare the fractions.

Use the bar models to help you.

a)

$\frac{1}{5}$ < $\frac{3}{5}$

b)

$\frac{5}{7}$ > $\frac{4}{7}$

c)

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

d)

$\frac{3}{8}$ < $\frac{7}{8}$

e)

$\frac{4}{9}$ < $\frac{6}{9}$
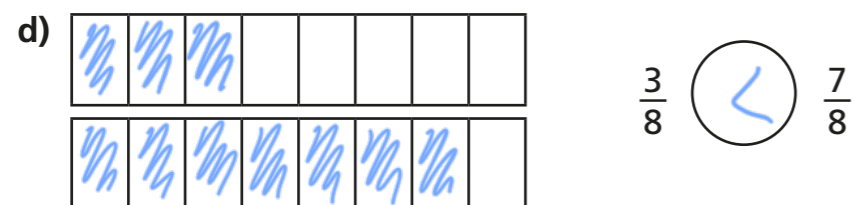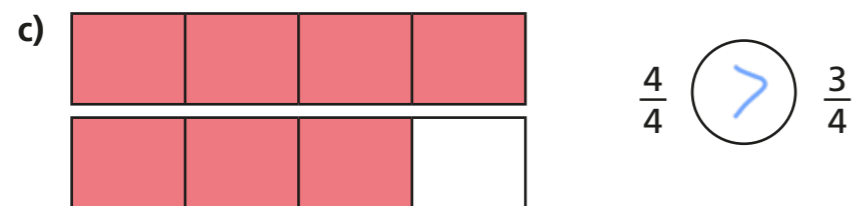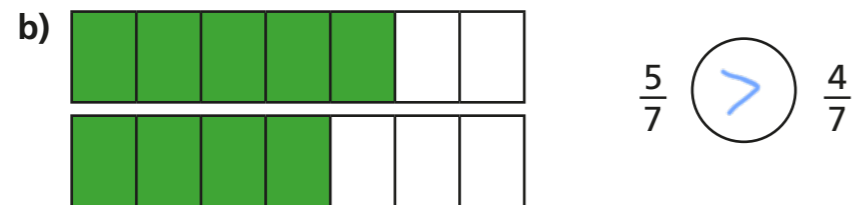
f) What do you notice about your answers?

g) Complete the sentence.

When the denominators are the same, the __greater__ (or smaller/

the numerator, the __greater__ the fraction. smaller)

2 a) Colour the bar models to show the fractions.

$\frac{14}{20}$

$\frac{9}{10}$

$\frac{4}{5}$

$\frac{3}{4}$

b) Use the bar models to sort these fractions in order from greatest to smallest.

| $\frac{14}{20}$ | $\frac{9}{10}$ | $\frac{4}{5}$ | $\frac{3}{4}$ |

$\frac{9}{10}$ $\frac{4}{5}$ $\frac{3}{4}$ $\frac{14}{20}$
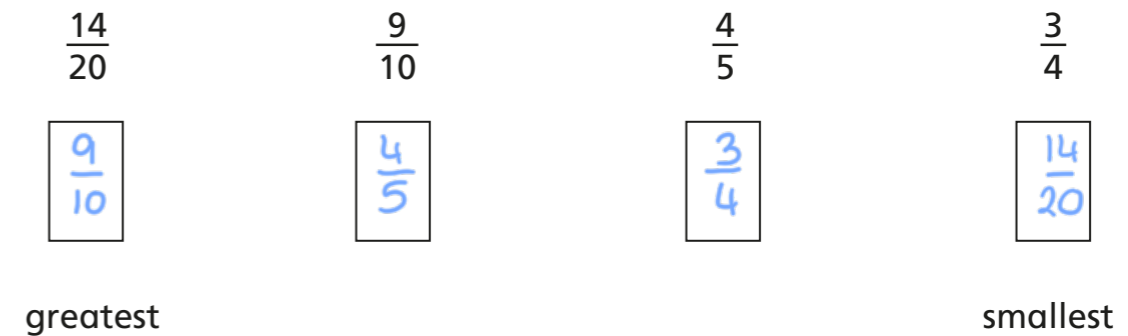
greatest   smallest

c) Order the fractions from smallest to greatest.

| $\frac{7}{10}$ | $\frac{1}{2}$ | $\frac{2}{5}$ | $\frac{3}{10}$ |

$\frac{3}{10}$ $\frac{2}{5}$ $\frac{1}{2}$ $\frac{7}{10}$

smallest   greatest
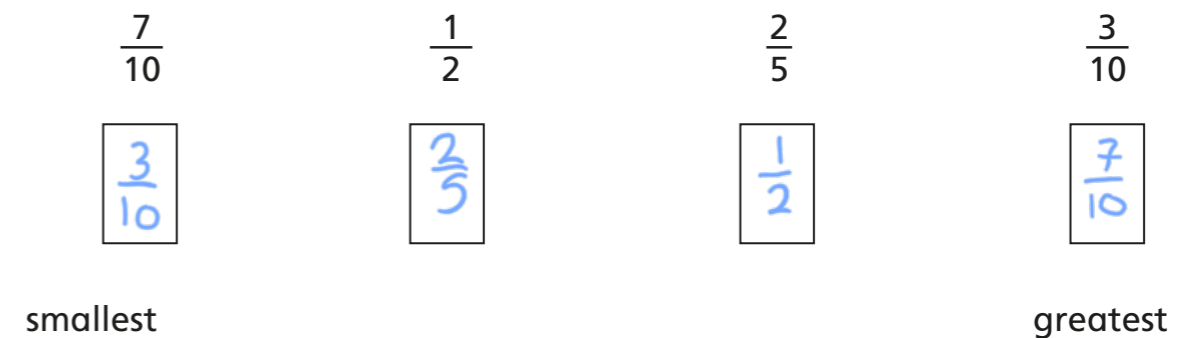
3 Amir is comparing the fractions $\frac{4}{15}$ and $\frac{3}{10}$

$$\frac{4}{15} = \frac{8}{30} \qquad \frac{3}{10} = \frac{9}{30}$$

$\frac{9}{30}$ is greater than $\frac{8}{30}$

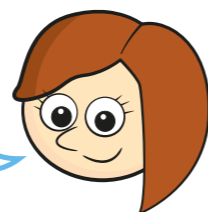$\frac{3}{10}$ is greater than $\frac{4}{15}$

Explain Amir's method.

Amir used equivalent fractions to find a common denominator and then compared the numerators.
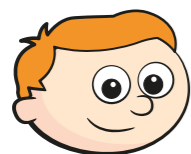
4 Ron and Rosie are practising penalties.

Ron scored 7 out of 10.

Rosie scored 23 out of 30

I scored more than you, so I should take penalties for the school team.

I did not miss as many as you, so I should take the penalties.

Compare fractions to explain who should take penalties for the school team.

$\frac{7}{10} = \frac{21}{30}$ $\qquad$ $\frac{23}{30} > \frac{21}{30}$ $\qquad$ Rosie should take penalties for the school team.

5 Write <, > or = to compare the fractions.

a) $\frac{3}{4}$ $<$ $\frac{5}{6}$ $\qquad$ d) $\frac{3}{5}$ $<$ $\frac{5}{7}$

b) $\frac{2}{3}$ $>$ $\frac{5}{9}$ $\qquad$ e) $\frac{9}{10}$ $>$ $\frac{3}{4}$

c) $\frac{2}{3}$ $<$ $\frac{7}{8}$ $\qquad$ f) $\frac{9}{10}$ $<$ $\frac{19}{20}$

6 Annie, Tommy and Kim are making flags for the school fair.

Annie has completed $3\frac{3}{4}$ flags, Tommy has completed $3\frac{2}{3}$ flags and Kim has completed $\frac{18}{5}$ flags.

Who has completed the most flags?

$\frac{18}{5} = 3\frac{3}{5}$ $\qquad$ $\frac{3}{4} > \frac{2}{3} > \frac{3}{5}$

Annie has completed the most flags

Compare and order (numerator)

1 Use strips of paper to represent the fractions and complete the sentences.

a) $\frac{1}{3}$, $\frac{1}{5}$ and $\frac{1}{6}$

The smallest fraction is $\boxed{\frac{1}{6}}$ The greatest fraction is $\boxed{\frac{1}{3}}$

b) $\frac{2}{3}$, $\frac{2}{5}$ and $\frac{2}{6}$

The smallest fraction is $\boxed{\frac{2}{6}}$ The greatest fraction is $\boxed{\frac{2}{3}}$

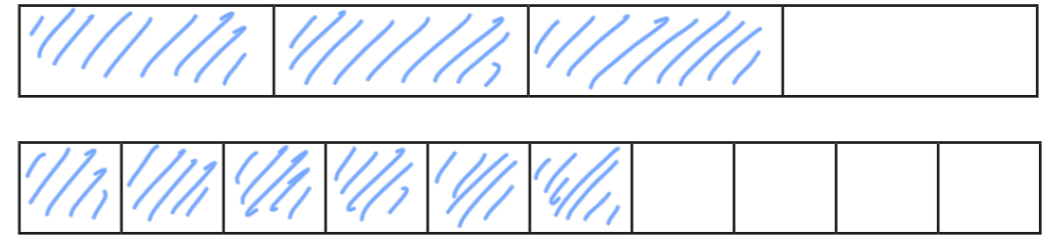c) $\frac{3}{3}$, $\frac{3}{5}$ and $\frac{3}{6}$

The smallest fraction is $\boxed{\frac{3}{6}}$ The greatest fraction is $\boxed{\frac{3}{3}}$

d) What do you notice about your answers?

e) Complete the sentence.

When the ___numerators___ are the same, the ___greater___

the denominator, the ___smaller___ the fraction. (or smaller/greater)

2 a) Colour the bar models to compare $\frac{3}{4}$ and $\frac{6}{10}$

b) Write <, > or = to complete the statement.

$\boxed{\frac{3}{4}}$ $\bigcirc{>}$ $\boxed{\frac{6}{10}}$ or $\frac{6}{10} < \frac{3}{4}$

3 Which is the greatest fraction? Circle your answer.

$\frac{3}{100}$ $\boxed{\frac{3}{1,000}}$ $\frac{3}{500}$

How do you know?

4 Write < or > to compare the fractions.

a) $\frac{1}{7}$ $\bigcirc{>}$ $\frac{1}{9}$ d) $\frac{11}{12}$ $\bigcirc{<}$ $\frac{11}{11}$

b) $\frac{4}{5}$ $\bigcirc{>}$ $\frac{4}{7}$ e) $\frac{19}{5}$ $\bigcirc{>}$ $\frac{19}{6}$

c) $\frac{3}{13}$ $\bigcirc{<}$ $\frac{3}{8}$ f) $\frac{107}{53}$ $\bigcirc{<}$ $\frac{107}{40}$

5 Explain how can you compare $\frac{2}{3}$ and $\frac{4}{5}$ using the same numerator rule.

$\frac{2}{3} = \frac{4}{6}$ $\frac{4}{6} < \frac{4}{5}$ so $\frac{2}{3} < \frac{4}{5}$

Complete the sentence to compare $\frac{2}{3}$ and $\frac{4}{5}$

$\boxed{\frac{4}{5}}$ is greater than $\boxed{\frac{2}{3}}$

6 Scott scored 20 out of 24 in a game.

Dani scored 5 out of 7

Compare their scores.

Explain who you think did best and why.

Scott: $\frac{20}{24} = \frac{5}{6}$ $\frac{5}{6} > \frac{5}{7}$ so   Scott did better.

Dani: $\frac{5}{7}$

7 Write <, > or = to complete each statement.

a) $\frac{2}{5}$ ◯ $<$ $1\frac{1}{3}$ b) $\frac{2}{5}$ ◯ $<$ $\frac{6}{11}$ c) $3\frac{2}{3}$ ◯ $>$ $\frac{11}{4}$

$1\frac{2}{5}$ ◯ $>$ $\frac{1}{3}$ $1\frac{2}{5}$ ◯ $<$ $3\frac{6}{11}$ $11\frac{2}{9}$ ◯ $<$ $\frac{101}{3}$

$1\frac{2}{5}$ ◯ $>$ $1\frac{1}{3}$ $3\frac{2}{5}$ ◯ $<$ $3\frac{6}{11}$ $11\frac{1}{9}$ ◯ $<$ $\frac{100}{8}$

$\frac{12}{5}$ ◯ $<$ $\frac{12}{3}$ $\frac{12}{5}$ ◯ $<$ $\frac{36}{11}$ $27\frac{3}{4}$ ◯ $<$ $\frac{111}{3}$

8 Explain how you know when it is best to compare the numerators or denominators of two fractions.

When the lowest common multiple of either the numerators or denominators is easier to find.