LO: Order and compare fractions and decimals.

Which is bigger?

$$\frac{2}{3} \text{ or } \frac{4}{5}$$

Explain your answer.

LO: Order and compare fractions and decimals.

To compare or order fractions, they must have the same denominator. Put these sets of fractions in ascending order:

1) $\frac{3}{4}$ $\frac{1}{3}$ $\frac{5}{6}$ $\frac{7}{12}$

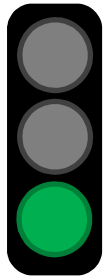
2) $\frac{3}{10}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{9}{20}$

3) $\frac{5}{12}$ $\frac{2}{3}$ $\frac{1}{6}$ $\frac{11}{24}$

4) $\frac{31}{50}$ $\frac{16}{25}$ $\frac{2}{5}$ $\frac{1}{4}$

Challenge

Write your own problem using a common denominator of 30.



LO: Order and compare fractions and decimals.

To compare or order fractions, they must have the same denominator. Put these sets of fractions in ascending order:

1) $\frac{3}{4}$ $\frac{1}{3}$ $\frac{5}{6}$ $\frac{7}{12}$ $\frac{1}{3}$ $\frac{7}{12}$ $\frac{3}{4}$ $\frac{5}{6}$

2) $\frac{3}{10}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{9}{20}$ $\frac{3}{10}$ $\frac{9}{20}$ $\frac{1}{2}$ $\frac{3}{4}$

3) $\frac{5}{12}$ $\frac{2}{3}$ $\frac{1}{6}$ $\frac{11}{24}$ $\frac{1}{6}$ $\frac{5}{12}$ $\frac{11}{24}$ $\frac{2}{3}$

4) $\frac{31}{50}$ $\frac{16}{25}$ $\frac{2}{5}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{2}{5}$ $\frac{31}{50}$ $\frac{16}{25}$

LO: Order and compare fractions and decimals.

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{20}$	$\frac{3}{20}$	$\frac{3}{10}$
$\frac{4}{5}$	$\frac{2}{5}$	$\frac{9}{10}$
$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$

Write each of these fractions with a common denominator.

LO: Change a fraction into a decimal

If the denominator is an easy factor of 10 or 100, change into an equivalent fraction. Change these fractions to decimals:

1) $\frac{3}{10}$

2) $\frac{7}{10}$

3) $\frac{3}{20}$

4) $\frac{11}{20}$

5) $\frac{4}{5}$

6) $\frac{3}{4}$

7) $\frac{2}{5}$

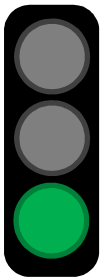
8) $\frac{2}{25}$

9) $\frac{13}{25}$

10) $\frac{7}{4}$

Challenge

Explain why changing a fraction to a decimal is easy if the denominator is a factor of 10 or 100.



LO: Change a fraction into a decimal

If the denominator is an easy factor of 10 or 100, change into an equivalent fraction. Change these fractions to decimals:

1) $\frac{3}{10}$ 0.3

2) $\frac{7}{10}$ 0.7

3) $\frac{3}{20}$ 0.15

4) $\frac{11}{20}$ 0.55

5) $\frac{4}{5}$ 0.8

6) $\frac{3}{4}$ 0.75

7) $\frac{2}{5}$ 0.4

8) $\frac{2}{25}$ 0.08

9) $\frac{13}{25}$ 0.52

10) $\frac{7}{4}$ 1.75

What different strategies could be used here?

LO: Order and compare fractions and decimals.

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{20}$	$\frac{3}{20}$	$\frac{3}{10}$
$\frac{4}{5}$	$\frac{2}{5}$	$\frac{9}{10}$
$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$

Change each of these fractions to a decimal using a denominator of 10 or 100.

LO: Change a fraction into a decimal

If the denominator is not an easy factor of 10 or 100, change using division. Change these fractions to decimals:

1) $\frac{1}{8}$

2) $\frac{3}{8}$

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

4) $\frac{2}{3}$

5) $\frac{1}{6}$

6) $\frac{5}{9}$

7) $\frac{2}{11}$

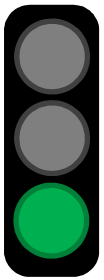
8) $\frac{5}{12}$

9) $\frac{4}{15}$

10) $\frac{8}{3}$

Challenge

Which answers terminate (stop) and which recur? Look at the denominators and try to explain why.



LO: Change a fraction into a decimal

If the denominator is not an easy factor of 10 or 100, change using division. Change these fractions to decimals:

1) $\frac{1}{8}$ 0.125

2) $\frac{3}{8}$ 0.375

3) $\frac{7}{8}$ 0.875

4) $\frac{2}{3}$ 0.666… or $0.\dot{6}$

5) $\frac{1}{6}$ 0.166… or $0.1\dot{6}$

6) $\frac{5}{9}$ 0.555… or $0.\dot{5}$

7) $\frac{2}{11}$ 0.34848… or $0.\dot{3}\dot{4}\dot{8}$

8) $\frac{5}{12}$ 0.41616… or $0.4\dot{1}\dot{6}$

9) $\frac{4}{15}$ 0.266… or $0.2\dot{6}$

10) $\frac{8}{3}$ $2.\dot{3}$

What different strategies could be used here?

LO: Order and compare fractions and decimals.

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$
$\frac{1}{20}$	$\frac{3}{20}$	$\frac{3}{10}$
$\frac{4}{5}$	$\frac{2}{5}$	$\frac{9}{10}$
$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$

Change each of these fractions to a decimal using division.

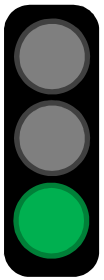
LO: Change a decimal to a fraction

Use place value to change a decimal to a fraction. Remember to cancel down! Try these:

1) 0.4
2) 0.7
3) 0.22
4) 0.56
5) 0.45
6) 0.35
7) 0.15
8) 1.25
9) 1.75
10) 2.4

Challenge

Write three different equivalent fractions that convert to 0.24 as a decimal.



LO: Change a decimal to a fraction

Use place value to change a decimal to a fraction. Remember to cancel down! Try these:

1) 0.4 $\frac{4}{10} = \frac{2}{5}$

2) 0.7 $\frac{7}{10}$

3) 0.22 $\frac{22}{100} = \frac{11}{50}$

4) 0.56 $\frac{56}{100} = \frac{14}{25}$

5) 0.45 $\frac{45}{100} = \frac{9}{20}$

6) 0.35 $\frac{35}{100} = \frac{7}{20}$

7) 0.15 $\frac{15}{100} = \frac{3}{20}$

8) 1.25 $1\frac{25}{100} = 1\frac{11}{50}$

9) 1.75 $1\frac{75}{100} = 1\frac{3}{4}$

10) 2.4 $2\frac{4}{10} = 2\frac{2}{5}$

LO: Order and compare fractions and decimals.

0.5	0.25	0.75
0.05	0.15	0.3
0.8	0.4	0.9
0.125	0.375	0.625

Change all of these decimals to fractions and cancel your answers down to their simplest forms.