

Student Name

Mathematics Stage 4

FRACTIONS DECIMALS PERCENTAGES

Book 6 Order and compare the value of
fractions, decimals, and percentages

Version: 260207

Report mistakes & suggest improvements:
<https://MrDingMaths.com>

CONTENTS

Overview	2
Comparing Fractions Decimals Percentages	3

OVERVIEW

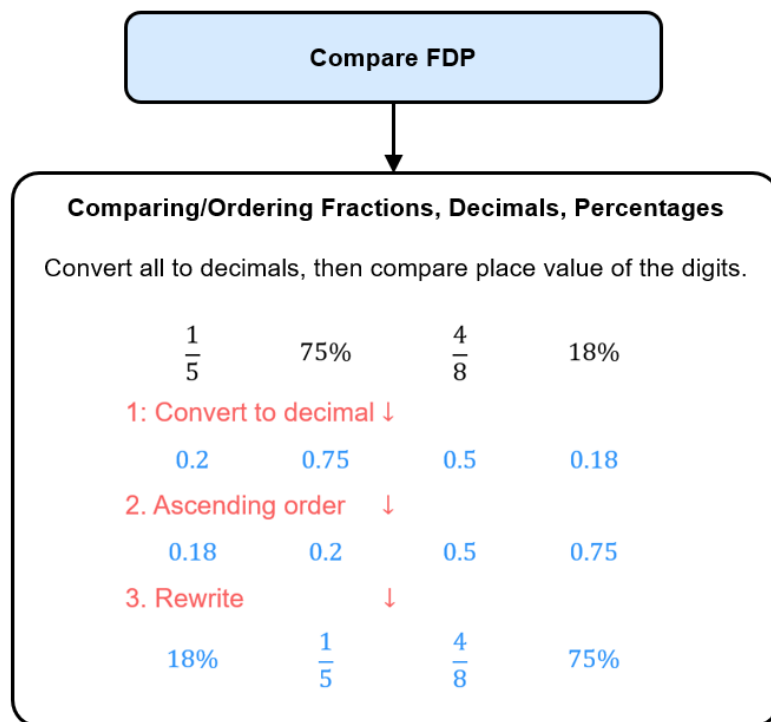
SYLLABUS CONTENT

MA4-FRC-C-01 represents and operates with fractions, decimals and percentages to solve problems

Order and compare the value of fractions, decimals and percentages

- Locate positive and negative fractions, decimals and mixed numbers on a number line to compare their relative values
- Compare and order fractions, mixed numbers, decimals (terminating and recurring) and percentages

SUMMARY



COMPARING FRACTIONS DECIMALS PERCENTAGES

- To compare the value of fractions, decimals, and percentages, it is most efficient to:
 - Convert everything to decimal form.
 - Order the decimals based on place value.
 - Rewrite the decimals in their original form.

Example Order these fractions, decimals, and percentages.

$\frac{1}{5}$	75%	$\frac{4}{8}$	18%	Explain why it is most efficient to convert numbers to decimals for comparison. <i>We can quickly compare decimals by looking at of the digits.</i>
1: Convert to decimal ↓				
0.2	0.75	0.5	0.18	
2. Ascending order ↓				
0.18	0.2	0.5	0.75	
3. Rewrite ↓				
18%	$\frac{1}{5}$	$\frac{4}{8}$	75%	

Order these fractions, decimals, and percentages, then show their approximate location.

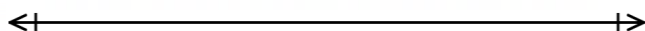
a

0.4 $\frac{3}{4}$ $\frac{4}{6}$ 83.33%

↓

0.4 0.75 0. $\dot{6}$ 0.8 $\dot{3}$

↓



0.4, $\frac{4}{6}$, $\frac{3}{4}$, 83.33%

b

$\frac{5}{2}$ 12.5% 1 $\frac{2}{3}$



12.5%, $\frac{2}{3}$, 1, $\frac{5}{2}$

1 Order these numbers.

a

60% $\frac{1}{2}$ 0.3 $\frac{3}{4}$ 0.4

0.3, 0.4, $\frac{1}{2}$, 60%, $\frac{3}{4}$

b

$\frac{1}{4}$ 30% $\frac{3}{8}$ 0.2 0.17

0.17, 0.2, $\frac{1}{4}$, 30%, $\frac{3}{8}$

c

73% $\frac{2}{3}$ 0.9 $\frac{3}{4}$ 0.87

$\frac{2}{3}$, 73%, $\frac{3}{4}$, 0.87, 0.9

d

65% $\frac{7}{10}$ 0.68 $\frac{2}{3}$ $\frac{3}{5}$

$\frac{3}{5}$, 65%, $\frac{2}{3}$, 0.68, $\frac{7}{10}$

e

66% $\frac{13}{20}$ 0.606 $\frac{1}{2}$ $\frac{3}{5}$

$\frac{1}{2}$, $\frac{3}{5}$, 0.606, $\frac{13}{20}$, 66%

f

0.13 $\frac{3}{20}$ 12% $\frac{1}{10}$ 0.09

0.09, $\frac{1}{10}$, 12%, 0.13, $\frac{3}{20}$

g

42% $\frac{4}{9}$ 0.5 $\frac{3}{8}$

$\frac{3}{8}$, 42%, $\frac{4}{9}$, 0.5

h

62.8% $\frac{14}{21}$ 0.61 $\frac{2}{3}$

0.61, 62.8%, $\frac{14}{21}$, $\frac{2}{3}$ (last 2 are equal)

2 Order these numbers. You do not need to draw a number line.

a

0.75 $\frac{7}{5}$ 250% $\frac{9}{3}$ $\frac{11}{10}$

0.75, 11/10, 7/5, 250%, 9/3

b

$\frac{4}{3}$ $\frac{3}{2}$ 2 233. $\dot{3}$ % 1.25

1.25, 4/3, 3/2, 2, 233. $\dot{3}$ %

c

$\frac{11}{8}$ 2.1 $\dot{6}$ $\frac{7}{2}$ 137.5% 3.50

11/8 (or 137.5%), 2.1 $\dot{6}$, 7/2 (or 3.50)

d

71.43% $\frac{4}{6}$ $\frac{7}{3}$ $\frac{2}{3}$ 1.6

4/6 (or 2/3), 71.43%, 1.6, 7/3

e

$\frac{10}{4}$ $\frac{13}{10}$ 0.65% 1.8 2. $\dot{5}$

0.65%, 13/10, 1.8, 10/4, 2. $\dot{5}$

f

$\frac{22}{15}$ $\frac{23}{20}$ $\frac{5}{12}$ $\frac{17}{8}$ 157%

5/12, 23/20, 22/15, 157%, 17/8

g

0.3 $\frac{1}{3}$ 23% $\frac{1}{4}$ 0.225

0.225, 23%, 1/4, 0.3, 1/3

h

72% $\frac{3}{4}$ $\frac{7}{10}$ 0.8 0.77

7/10, 72%, 3/4, 0.77, 0.8

i

$\frac{1}{2}$ 0.22 0.52 53% 0.502 $\frac{2}{5}$

0.22, 2/5, 0.5, 0.502, 0.52, 53%

j

$\frac{3}{10}$ $\frac{1}{3}$ 33% 31% 0.35 3.3

3/10, 31%, 33%, 1/3, 0.35, 3.3

k

0.05 $\frac{1}{5}$ $\frac{1}{50}$ 15% 1.55 $\frac{15}{10}$

1/50, 0.05, 15%, 1/5, 15/10, 1.55

l

1.6 16% 106% 0.106 0.06 $\frac{1}{6}$

0.06, 0.106, 16%, 1/6, 106%, 1.6

- 3 Here are some of Brian's exam results.

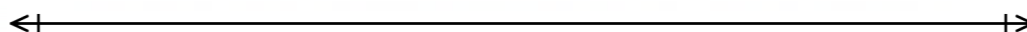
Art: $\frac{14}{15}$ Biology: 64% German: 49% Latin: $\frac{25}{43}$ Music: $\frac{11}{15}$ Physics: 54%

Arrange the subjects in order, starting with the best result.

Art, music, biology, Latin, physics, German

- 4 Order these numbers and place them on a number line.

$\frac{1}{2}$ 0.35 75% $\frac{3}{5}$ 17% 0.02 $1\frac{4}{5}$ 0.8



0.02, 17%, 0.35, $\frac{1}{2}$, $\frac{3}{5}$, 0.8, 75%, $1\frac{4}{5}$

- 5 Arrange these fractions in ascending order.

$\frac{3}{4}$, $-\frac{1}{2}$, $-\frac{5}{3}$, $-\frac{3}{4}$, $-1\frac{1}{2}$, $\frac{1}{16}$, $-\frac{1}{5}$, $3\frac{1}{10}$

$-\frac{5}{3}$, $-1\frac{1}{2}$, $-\frac{3}{4}$, $-\frac{1}{2}$, $-\frac{1}{5}$, $\frac{1}{16}$, $\frac{3}{4}$, $3\frac{1}{10}$