Year 5

MATHS WEEK 5- DAY 1

FRACTIONS PRACTICE WEEK

Challenge 1

You have 3 minutes to complete the next 3 questions!
Good luck

Challenge 1

5,329 ÷ 100 =

1 mark

$\frac{7}{16} - \frac{6}{16} =$

1 mark

3. Rewrite these fractions in descending order.

$\frac{3}{6}$ $\frac{5}{6}$ $\frac{8}{6}$ $\frac{4}{6}$

Challenge 1

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<u>Solutions</u>

1. 53.29
2. 1/16
3. 8/6, 5/6, 4/6, 3/6

Challenge 2- Multiplication

This week please use the Times Tables Practice sheet for our Challenge 2.

How many did you get right?

WALT: to compare and order fractions whose denominators are multiples of the same number

Vocabulary Can you remember what these mean?

denominator
numerator
multiples
equivalent
compare
order

Vocabulary: Fractions Year 5

Fraction Vocabulary

proper fraction
improper fraction
mixed numbers
numerator
denominator
decimal fraction
decimal place

A proper fraction is a fraction that is less than one, with the numerator less than the denominator e.g. 2/3

An improper fraction is a fraction that is more than one, with the numerator greater than the denominator e.g. 4/3. "They are top-heavy!"

A mixed number is a fraction that consists of an integer (whole number) and a fraction e.g. 1 2/3

A numerator is the top number in a fraction and shows how many parts you have . The denominator is the number on the bottom and shows how many equal parts the item is divided into.

e.g. ¾ 3 = numerator 4 = denominator

A decimal fraction is a fraction where the denominator is a power of 10 e.g.

4/10 = 0.4 34/100 = 0.34

Decimal place – this is the number of digits after the decimal point.

0.4 has one decimal place 0.34 has two decimal places

numerator

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

denominator

$$\frac{3}{5}$$

proper fraction

$$\frac{13}{7}$$

improper fraction

$$2\frac{1}{4}$$

mixed number

Vocabulary: Fractions
Year 5/6

Fraction Vocabulary

proper fraction
improper fraction
mixed numbers
numerator
denominator
equivalent
half, third, quarter, fifth, sixth, tenth, hundredth, thousandth
convert

Equivalent fractions are two or more fractions which have the same numerical value but use different numerators and denominators e.g. ¾, 6/8, 12/16 and 300/400 are all equivalent fractions. To be equivalent, the numerators and denominators must increase/decrease in the same ratio e.g. "If the numerator is multiplied by 3, then the denominator must be multiplied by 3."

To convert a fraction means to change it from one form to another, without changing its size or value. You might convert (change) from a mixed number to an improper fraction, or vice versa.

To simplify a fraction means to reduce it to a simpler form by cancellation of common factors e.g. 6/15 can be simplified to 2/5 as 3 is a common factor of 6 and 15.

1/2

1/2

1/4

1/8

WALT: to compare and order fractions whose denominators are multiples of the same number

Comparing fractions

$\frac{2}{3}$ $\frac{3}{6}$ $\frac{5}{12}$ $\frac{1}{6}$

What is the common multiple?

Write down which fractions have the same denominator.

WALT: to compare and order fractions whose denominators are multiples of the same number

Comparing fractions

$$\frac{2}{3} \qquad \frac{3}{6} \qquad \frac{5}{12} \qquad \frac{1}{6}$$

In these fractions, there are 3 different **denominators** 3, 6 and 12. Before we can compare these fractions, we must find the **common multiple** for the **denominators**, which is 12.

WALT: to compare and order fractions whose denominators are multiples of the same number

Comparing fractions

$$\frac{2}{3} = \frac{\quad}{12}$$

$$\frac{3}{6} = \frac{\quad}{12}$$

$$\frac{5}{6} = \frac{\quad}{12}$$

$$\frac{1}{6} = \frac{\quad}{12}$$

The denominators here are all multiples of 3. We must change all the denominators to 12, as this is the **common multiple.**
Now we must work out the **numerator.** Can you remember the rule to work this out?

WALT: to compare and order fractions whose denominators are multiples of the same number

Let's do one together.

$$\frac{2}{3} = \frac{?}{12}$$

3 x ? = 12. The answer is

- Start with the denominator to work out what number the denominator is multiplied by.

WALT: to compare and order fractions whose denominators are multiples of the same number

Let's do one together.

$$\frac{2}{3} = \frac{?}{12}$$

3 x ? = 12. The answer is 4.

2 x 4 = ? The answer is 8.

So $\frac{2}{3} = \frac{8}{12}$

- Start with the denominator to work out what number the denominator is multiplied by.
- Now, go to the numerator, which we must multiply by 4 (because this is what we did with the denominator).
- Multiply 2 by 4.
- These are now equivalent fractions.

WALT: to compare and order fractions whose denominators are multiples of the same number

$$\frac{2}{3} = \frac{8}{12}$$

$$\frac{3}{6} = \frac{\quad}{12}$$

$$\frac{5}{6} = \frac{\quad}{12}$$

$$\frac{1}{6} = \frac{\quad}{12}$$

Can you complete the rest of these?

WALT: to compare and order fractions whose denominators are multiples of the same number

$$\frac{2}{3} = \frac{8}{12}$$

$$\frac{3}{6} = \frac{6}{12}$$

$$\frac{5}{6} = \frac{10}{12}$$

$$\frac{1}{6} = \frac{2}{12}$$

Did you get them all right?

WALT: to compare and order fractions whose denominators are multiples of the same number

$\frac{2}{3}$ $\frac{3}{6}$ $\frac{5}{12}$ $\frac{1}{6}$

$\frac{8}{12}$ $\frac{6}{12}$ $\frac{5}{12}$ $\frac{2}{12}$

Remember, what you do to the denominator you do to the numerator.

WALT: to compare and order fractions whose denominators are multiples of the same number

$\frac{2}{3}$ $\frac{3}{6}$ $\frac{5}{12}$ $\frac{1}{6}$

$\frac{8}{12}$ $\frac{6}{12}$ $\frac{5}{12}$ $\frac{2}{12}$

Remember, what you do to the denominator you do to the numerator.

Now that the **denominator** is the same, we can **order** the fractions in **ascending order.**

$\frac{1}{6}$ $\frac{5}{12}$ $\frac{3}{6}$ $\frac{2}{3}$

$\left(\frac{2}{12}\right)$ $\left(\frac{5}{12}\right)$ $\left(\frac{6}{12}\right)$ $\left(\frac{8}{12}\right)$

WALT: to compare and order fractions whose denominators are multiples of the same number

$$\frac{4}{5} \qquad \frac{2}{10} \qquad \frac{1}{20} \qquad \frac{4}{10}$$

1. Work out the common multiple for the denominator.
2. For each fraction, change the denominator to this common multiple.
3. Work out the numerator for each fraction, doing the same to the numerator as you did to the denominator.
4. Finally, order the numbers (remembering to write down the fractions that you were given to begin with.)

WALT: to compare and order fractions whose denominators are multiples of the same number

$\frac{4}{5}$ $\frac{2}{10}$ $\frac{1}{20}$ $\frac{4}{10}$

What was your answer? Check with mine!

$\frac{1}{20}$ $\frac{4}{20}$ $\frac{8}{20}$ $\frac{16}{20}$

WALT: to compare and order fractions whose denominators are multiples of the same number

Your turn! Rewrite these fractions in ascending order.

$\frac{2}{3}$ $\frac{5}{6}$ $\frac{1}{12}$ $\frac{1}{24}$ $\frac{4}{6}$

$\frac{2}{5}$ $\frac{7}{15}$ $\frac{3}{25}$ $\frac{19}{20}$ $\frac{7}{20}$

$\frac{2}{3}$ $\frac{5}{9}$ $\frac{5}{18}$ $\frac{4}{6}$ $\frac{5}{6}$

WALT: to compare and order fractions whose denominators are multiples of the same number

Problem Solving:

What fraction is equivalent to $\frac{1}{3}$ and has a denominator of 9?

Can you write an explanation for how you know?

WALT: to compare and order fractions whose denominators are multiples of the same number

$\frac{1}{4}$ $\frac{3}{16}$ $\frac{3}{8}$

$\square$ $\square$ $\square$

$>$ $>$

Place the fractions in the correct boxes. How did you worked it out?

WALT: to compare and order fractions whose denominators are multiples of the same number

$$\frac{4}{9} > \frac{5}{18}$$

True or false? Explain **how you know.**

WALT: to compare and order fractions whose denominators are multiples of the same number

$\frac{3}{8}$ is greater than $\frac{2}{16}$.

Explain why this is correct.