Maths- Fractions

Learning objective; To assess my understanding around fractions with test based questions.

You have worked brilliantly with fractions over the last 7 weeks.

Today you are going to have a go at some test based questions on the fraction topics we have covered.

This will give you an idea on the areas of fractions you are strongest at, and the ones which need more attention.

Each page will outline the learning objective and skill being assessed.

Copy the question into your book, including the mark box on the left, answers will be available at the end to self assess.

Compare and order fractions whose denominators are all multiples of the same number.

a) Use the symbols < or > to compare these fractions:

	< or >	
$\frac{3}{4}$		$\frac{5}{8}$
$\frac{4}{9}$		$\frac{1}{3}$
$\frac{2}{5}$		$\frac{7}{15}$

3 marks

b) Order these fractions from smallest to largest:

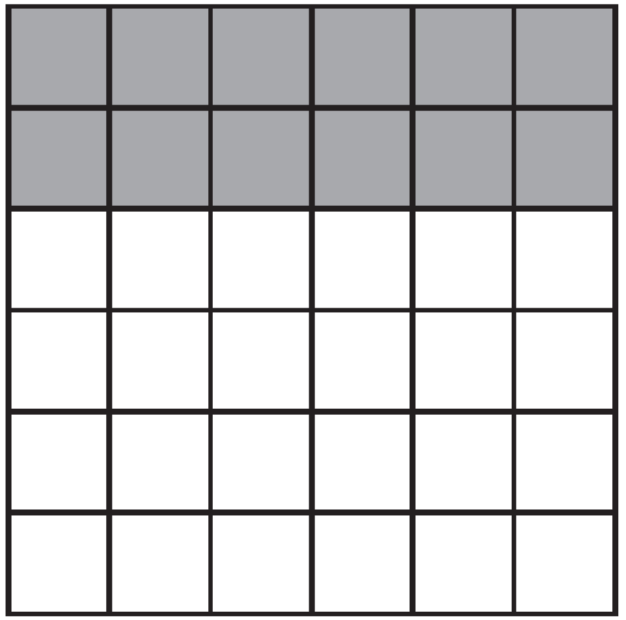
$\frac{1}{4}$ $\frac{5}{8}$ $\frac{3}{16}$ $\frac{1}{20}$

smallest largest

1 mark

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

a) Here is a square. $\frac{12}{36}$ of the square has been shaded. Use the diagram to help you write two equivalent fractions of $\frac{12}{36}$.



$\frac{12}{36}$ = ☐ = ☐

2 marks

b) Complete these equivalent pairs:

$\frac{3}{4} = \frac{\quad}{8}$

$\frac{4}{6} = \frac{\quad}{3}$

$\frac{4}{\quad} = \frac{8}{10}$

3 marks

Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$].

a) Convert these improper fractions into mixed numbers:

improper fraction	mixed number
$\frac{5}{2}$	
$\frac{6}{4}$	
$\frac{10}{3}$	
$\frac{15}{6}$	

4 marks

b) Convert these mixed numbers into improper fractions:

mixed number	improper fraction
$5\ \frac{1}{2}$	
$3\ \frac{2}{3}$	
$3\ \frac{3}{4}$	
$1\ \frac{7}{8}$	

4 marks

Add and subtract fractions with the same denominator, and denominators that are multiples of the same number.

a) Add the following:

$\frac{5}{9} + \frac{2}{9} =$ ☐

$\frac{1}{4} + \frac{3}{8} =$ ☐

2 marks

b) Subtract the following:

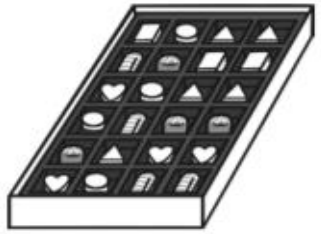
$\frac{7}{10} - \frac{4}{10} =$ ☐

$\frac{9}{15} - \frac{1}{3} =$ ☐

2 marks

Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.

a) Dipali buys her Mum a box of chocolates. There are 24 chocolates in the box. Mum eats $\frac{1}{4}$ of the chocolates as well as giving $\frac{1}{3}$ of the chocolates to her family. How many chocolates are left? Show your working out.



2 marks

b) A restaurant sells milkshakes in two sizes. A small milkshake contains 400ml and a large milkshake contains $\frac{3}{10}$ more.

i. How much does a large milkshake contain? Show your working out.

2 marks

Answers

question	answer	marks	notes
1. Compare and order fractions whose denominators are all multiples of the same number.			
a	$\frac{3}{4} > \frac{5}{8}$ $\frac{4}{9} > \frac{1}{3}$ $\frac{2}{5} < \frac{7}{15}$	3	
b	$\frac{1}{20}$ $\frac{3}{16}$ $\frac{1}{4}$ $\frac{5}{8}$	1	
2. Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.			
a	Two fractions from: $\frac{2}{6}$ $\frac{1}{3}$ $\frac{6}{18}$ $\frac{4}{12}$ $\frac{3}{9}$	2	
b	$\frac{3}{4} = \frac{6}{8}$ $\frac{4}{6} = \frac{2}{3}$ $\frac{4}{5} = \frac{8}{10}$	3	
3. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$].			
a	$\frac{5}{2}$ = $2\frac{1}{2}$ $\frac{6}{4}$ = $1\frac{2}{4}$ or $1\frac{1}{2}$ $\frac{10}{3}$ = $3\frac{1}{3}$ $\frac{15}{6}$ = $2\frac{3}{6}$ or $2\frac{1}{2}$	4	
b	$5\frac{1}{2}$ = $\frac{11}{2}$ $3\frac{2}{3}$ = $\frac{11}{3}$ $3\frac{3}{4}$ = $\frac{15}{4}$ $1\frac{7}{8}$ = $\frac{15}{8}$	4	

4. Add and subtract fractions with the same denominator, and denominators that are multiples of the same number.			
	$\frac{5}{9} + \frac{2}{9} = \frac{7}{9}$ $\frac{1}{4} + \frac{3}{8} = \frac{5}{8}$ $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$ $\frac{9}{15} - \frac{1}{3} = \frac{4}{15}$	4	
Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.			
a	10 left	2	If correct answer 2 marks. If working out shows a sensible way of working out, but the answer is incorrect award 1 mark
b i.	520ml	2	

Total marks

/25

Plenary-Note to teacher

In your books can you write a statement around how you did with this fraction test. It would be amazing if you could include some of the correct vocabulary and learning objectives.
e.g. *I felt I did very well with recognising mixed number and improper fractions and convert from on to another, I struggled most with comparing and ordering fractions*.