

Y6 Maths week beginning 20th April

Welcome back to home learning y6!

This week's learning objective is: *to add and subtract fractions* .

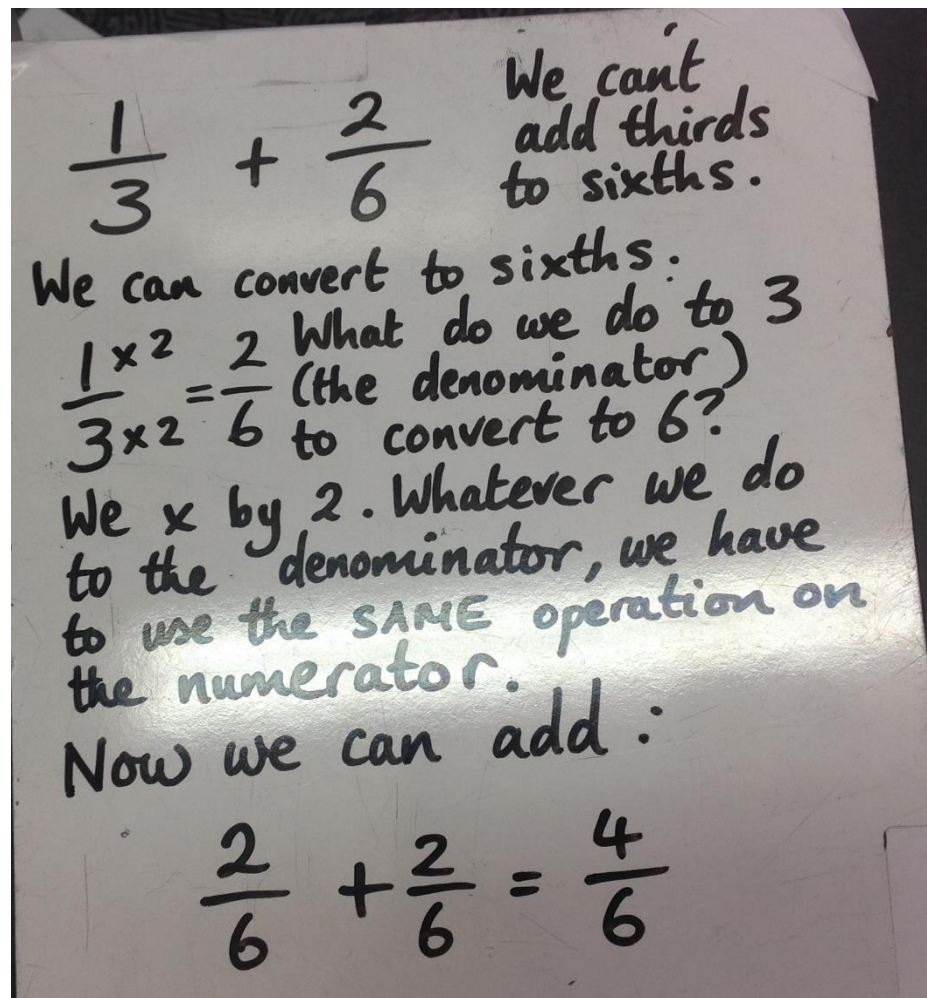
This is the sequence for **Monday**

/Tuesday/Wednesday/Thursday/Friday

***Remember to scroll right to the end of this sequence when you need the answers**

Monday 20th April

Remember that you cannot add and subtract fractions unless they have the **same denominator:**



Now look at [www. Maths is fun.com](http://www.Mathsisfun.com)...adding and subtracting mixed fractions and look at the visual demonstrations.

Next complete the pre-assessment work:

Spring 1: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____ Spring 1: Week 4

Objective: Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
Fractions

$\frac{3}{4} + \frac{1}{4}$			$8\frac{5}{6} + 9\frac{1}{2}$	
$\frac{5}{6} + \frac{4}{5}$			$7\frac{1}{4} + 9\frac{7}{8}$	
$\frac{3}{4} + \frac{1}{8}$				
$\frac{1}{5} + \frac{3}{10}$			$\frac{3}{4} - \frac{5}{8}$	
$4\frac{4}{5} + \frac{7}{10}$			$\frac{9}{10} - \frac{3}{8}$	

Tuesday

Think about improper fractions today:

Improper fractions,
or "top-heavy fractions" →

$\frac{8}{6}$ Remember $\frac{6}{6} = 1$ whole so how
many groups of 6 can you
make out of the numerator?

$1 \text{ r. } 2 = 1 \frac{2}{6}$ ← two
group of 6 whole sixths
left
over

So $\frac{8}{6} = 1 \frac{2}{6}$

So with $\frac{21}{3}$ remember that $\frac{3}{3} = 1$ whole so how many groups of 3 can you make out of numerator 21? The answer is seven groups of 3 without any remainders

therefore $\frac{21}{3} = 7$

and remember that where a whole number and a fraction are combined into one mixed number e.g: $3\frac{2}{7}$ this is called a mixed number or a mixed fraction.

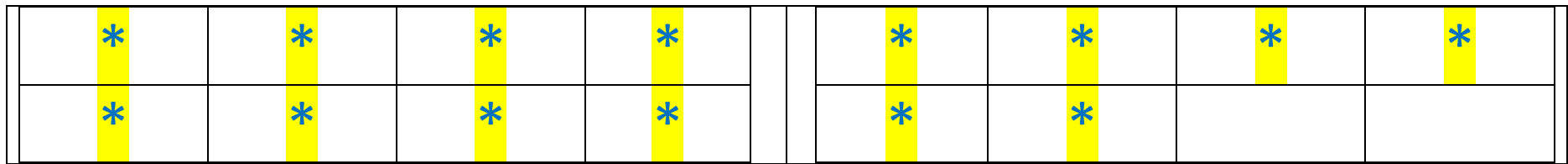
Now go to www.topmarks.co.uk..... fraction matcher to match equivalent fractions and mixed numbers visually.

In the fractions interactive section start at level 3 if you feel a little unsure and need some practice. Otherwise start at level 4.

In the mixed numbers interactive section start at level 4.

Make a poster showing equivalent fractions as written fractions /mixed numbers and as diagrams e.g:

$$\frac{7}{4} \text{ (two circles, one fully blue, one 3/4 blue)} = \frac{14}{8}$$



$$= 1 \frac{3}{4}$$

Wednesday

Remember how to simplify (reduce) fractions: Look at the demonstrations on

simplifying fractions www.maths.isfun.com Next, complete practice (skills) task:

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Work out the common denominator for a pair of fractions with different denominators. ➤ Add two fractions with different denominators. ➤ Add more than two fractions with different denominators. ➤ Subtract one fraction from another with different denominators. ➤ Subtract one mixed number from another where there are different denominators. 	<ul style="list-style-type: none"> • This unit helps pupils see the relationship between fractions with different denominators by changing the fractions so that they have a common denominator. • The teaching element will mainly concentrate on helping pupils to change fractions so that they have a common denominator. • This needs to be done using simple apparatus with familiar fractions with tenths; eighths, etc. in the first instance. 	<p>Find the missing denominator or numerator in the following:</p> $\frac{6}{8} = \frac{\square}{4} ; \frac{14}{16} = \frac{\square}{8} ; \frac{22}{24} = \frac{11}{\square} ; \frac{5}{6} = \frac{10}{\square}$ <p>Reduce the following improper fractions to their simplest mixed fraction form:</p> $\frac{17}{5} \quad \frac{26}{8} \quad \frac{19}{3} \quad \frac{27}{4} \quad \frac{38}{10} \quad \frac{16}{5} \quad \frac{52}{10} \quad \frac{19}{8}$ <p>Complete these additions, presenting the answers in their simplest forms:</p> $\frac{3}{4} + \frac{1}{8} = \square \quad \frac{3}{16} + \frac{3}{4} = \square \quad \frac{5}{7} + \frac{2}{3} = \square \quad \frac{3}{4} + \frac{7}{8} = \square$ <p>Complete these subtractions, presenting the answers in their simplest forms:</p> $\frac{7}{8} - \frac{1}{4} = \square \quad \frac{9}{10} - \frac{3}{8} = \square \quad 1\frac{1}{2} - \frac{3}{8} = \square \quad \frac{23}{4} - \frac{7}{8} = \square \quad 4\frac{1}{4} - 1\frac{1}{2} = \square$

Thursday complete mastery: Remember on the pizza question that if a pizza is divided into ten pieces then it is divided into tenths (so 10 will be your denominator number)

Spring 1: Week 4: Mastering this Objective – Deeper Understanding

Fractions: Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Work out the common denominator for a pair of fractions with different denominators. ➤ Add two fractions with different denominators. ➤ Add more than two fractions with different denominators. ➤ Subtract one fraction from another with different denominators. ➤ Subtract one mixed number from another where there are different denominators. 	<p>Pizza Time 4 pizzas were delivered to a party of 10 children. The vegetarian pizza was divided into 10; The chicken pizza divided into 8 pieces; The peperoni pizza divided into 6 pieces; The ham and pineapple dived into 9. Tom had 2 pieces of the vegetarian; 3 pieces of the chicken and 3 pieces of the ham and pineapple. How much of a whole pizza did he eat? Make up other questions and let your friends solve them.</p>	<p>Go Kart Racing A circuit is 2km long. The Red go Kart went around $3\frac{3}{4}$ laps of the track and the Blue go Kart went for $5\frac{1}{4}$ laps. How far did they travel in total? The Green go Kart travelled for $6\frac{3}{4}$Km</p>
	<p>Fencing a Field A farmer buys $3\frac{7}{8}$km of wire netting to go around two separate rectangular fields. He uses $1\frac{3}{4}$Km for the first field and $2\frac{5}{8}$km for the second field. How much wire netting does he have left? What could be the perimeters and areas of the two fields?</p>	<p>Ordering Order the following fractions (smallest first):</p> <p>1. $\frac{5}{10}$ $\frac{6}{4}$ $\frac{7}{8}$ $\frac{8}{5}$ $\frac{2}{3}$ $\frac{6}{8}$ $\frac{7}{9}$ $\frac{8}{3}$</p> <p>2. $\frac{9}{10}$ $\frac{3}{2}$ $\frac{7}{3}$ $\frac{3}{4}$ $\frac{7}{6}$ $\frac{2}{7}$ $\frac{6}{5}$ $\frac{7}{2}$</p>

Friday please complete mastery before moving into greater depth:

Teaching Sequence

- Work out the common denominator for a pair of fractions with different denominators.
- Add two fractions with different denominators.
- Add more than two fractions with different denominators.
- Subtract one fraction from another with different denominators.
- Subtract one mixed number from another where there are different denominators.

Activities for pupils working at greater depth:

Pizza Time

Three children were having an argument saying that one of them had eaten more pizza than the others.

They had 4 pizzas delivered:

The vegetarian pizza was divided into 6;

The chicken pizza divided into 10 pieces;

The peperoni pizza divided into 9 pieces;

The ham and pineapple dived into 8.

The table below shows how many pieces of each every had.

Work out who had most pizza.

Pizza	John	Frances	Aysha
Vegetarian	3	1	2
Chicken	2	4	4
Peperoni	2	4	3
Ham	3	2	3

Sharing Toys

Three children shared 275 toy figures. There were 3 different figures: storm troopers; galaxy raiders; and space pioneers. From the table below work out how many each had.

	Harry	Gill	Jem
Storm Troopers	20	$\frac{2}{5}$	$\frac{1}{4}$
Galaxy raiders	$\frac{1}{2}$	$\frac{1}{5}$	30
Space Pioneers	$\frac{1}{4}$	30	$\frac{1}{2}$

Adding and Subtracting

When I add two mixed numbers together where the fractional values have different denominators, my answer is $4\frac{3}{5}$.

Give two examples of the numbers I added.

When I subtracted one mixed number from another where the fractions had different denominators, my answer was $3\frac{2}{5}$.

Give two examples of the numbers I subtracted.

Answers:

Focus Maths Answers Year 6

Spring Term 1 Week 4

Page 96 Pre-Learning Task

$$\frac{3}{4} + \frac{1}{4} = \mathbf{1}$$

$$\frac{5}{6} + \frac{4}{5} = \frac{25}{30} + \frac{24}{30} = \frac{49}{30} = \mathbf{1 \frac{19}{30}}$$

$$\frac{3}{4} + \frac{1}{8} = \mathbf{\frac{7}{8}}$$

$$\frac{1}{5} + \frac{3}{10} = \frac{5}{10} = \mathbf{\frac{1}{2}}$$

$$\frac{4}{5} + \frac{7}{10} = \frac{15}{10} = 1 \frac{5}{10} = \mathbf{1 \frac{1}{2}}$$

$$8 \frac{5}{6} + 9 \frac{1}{2} = \mathbf{18 \frac{1}{3}}$$

$$7 \frac{1}{4} + 9 \frac{7}{8} = \mathbf{17 \frac{1}{8}}$$

$$\frac{3}{4} - \frac{5}{8} = \mathbf{\frac{1}{8}}$$

$$\frac{9}{10} - \frac{3}{8} = \mathbf{\frac{21}{40}}$$

Page 97 Practice and Consolidation

Find the missing denominator or numerator in the following:

$$\frac{6}{8} = \mathbf{\frac{3}{4}} \quad \frac{14}{16} = \mathbf{\frac{7}{8}} \quad \frac{22}{24} = \mathbf{11/12} \quad \frac{5}{6} = \mathbf{10/12}$$

Reduce the following improper fractions to their simplest mixed fraction form:

$$\frac{17}{5} = \mathbf{3 \frac{2}{5}} \quad \frac{26}{8} = \mathbf{3 \frac{1}{4}} \quad \frac{19}{3} = \mathbf{6 \frac{1}{3}} \quad \frac{27}{4} = \mathbf{6 \frac{3}{4}} \quad \frac{38}{10} = \mathbf{3 \frac{4}{5}} \quad \frac{16}{5} = \mathbf{3 \frac{1}{5}}$$

$$\begin{array}{r} 52 \\ 10 \end{array} = \mathbf{51} \quad \begin{array}{r} 19 \\ 8 \end{array} = \mathbf{23}$$

Complete these additions, presenting the answers in their simplest forms:

$$\begin{array}{r} 3 \\ 4 \end{array} + \begin{array}{r} 1 \\ 8 \end{array} = \mathbf{7} \quad \begin{array}{r} 3 \\ 16 \end{array} + \begin{array}{r} 3 \\ 4 \end{array} = \mathbf{15} \quad \begin{array}{r} 5 \\ 7 \end{array} + \begin{array}{r} 2 \\ 3 \end{array} = \mathbf{18} \quad \begin{array}{r} 3 \\ 4 \end{array} + \begin{array}{r} 7 \\ 8 \end{array} = \mathbf{15}$$

Complete these subtractions, presenting the answers in their simplest forms:

$$\begin{array}{r} 7 \\ 8 \end{array} - \begin{array}{r} 1 \\ 4 \end{array} = \mathbf{5} \quad \begin{array}{r} 9 \\ 10 \end{array} - \begin{array}{r} 3 \\ 8 \end{array} = \mathbf{21} \quad \begin{array}{r} 11 \\ 2 \end{array} - \begin{array}{r} 3 \\ 8 \end{array} = \mathbf{11} \quad \begin{array}{r} 23 \\ 4 \end{array} - \begin{array}{r} 7 \\ 8 \end{array} = \mathbf{17} \quad \begin{array}{r} 41 \\ 4 \end{array} - \begin{array}{r} 11 \\ 2 \end{array} = \mathbf{23}$$

Pizza Time

4 pizzas were delivered to a party of 10 children. The vegetarian pizza was divided into 10; the chicken pizza divided into 8 pieces; the pepperoni pizza divided into 6 pieces; the ham and pineapple dived into 9. Tom had 2 pieces of the vegetarian; 3 pieces of the chicken and 3 pieces of the ham and pineapple. How much of a whole pizza did he eat?

$$\frac{2}{10} + \frac{3}{8} + \frac{3}{9} = \frac{24}{120} + \frac{45}{120} + \frac{40}{120} = \frac{109}{120} \text{ (approx 91\%)}$$

Fencing a Field

A farmer buys $4\frac{7}{8}$ km of wire netting to go around two separate rectangular fields. He uses $1\frac{3}{4}$ Km for the first field and $2\frac{3}{8}$ km for the second field.

How much wire netting does he have left? $\frac{3}{4}$ km or 750m

What could be the perimeters and areas of the two fields?

E.g. Field 1 Perimeter $1\frac{3}{4}$ km Area $3/16$ km² ($\frac{1}{2}$ km x $\frac{3}{8}$ km)
Field 2 Perimeter $2\frac{3}{8}$ km Area $21/64$ km² ($\frac{3}{4}$ km x $7/16$ km)

Go Kart Racing

A circuit is 2km long. The Red go Kart went around $3\frac{3}{4}$ laps of the track and the Blue go Kart went for $5\frac{1}{4}$ laps. How far did they travel in total?

Red $7\frac{1}{2}$ km or 7.5km

Blue $10\frac{1}{2}$ km or 10.5km

The Green go Kart travelled for $6\frac{3}{4}$ Km, how many laps did he do? $3\frac{3}{8}$

Ordering

Order the following fractions (smallest first):

1. $\frac{5}{10}$ $\frac{6}{4}$ $\frac{7}{8}$ $\frac{8}{5}$ $\frac{2}{3}$ $\frac{6}{8}$ $\frac{7}{9}$ $\frac{8}{3}$
- $\frac{5}{10}$ $\frac{2}{3}$ $\frac{6}{8}$ $\frac{7}{9}$ $\frac{7}{8}$ $\frac{6}{4}$ $\frac{8}{5}$ $\frac{8}{3}$**

2. $\frac{9}{10}$ $\frac{3}{2}$ $\frac{7}{3}$ $\frac{3}{4}$ $\frac{7}{6}$ $\frac{2}{7}$ $\frac{6}{5}$ $\frac{7}{2}$
 $\frac{2}{7}$ $\frac{3}{4}$ $\frac{9}{10}$ $\frac{7}{6}$ $\frac{6}{5}$ $\frac{3}{2}$ $\frac{7}{3}$ $\frac{8}{2}$

Pizza Time

Three children were having an argument saying that one of them had eaten more pizza than the others. They had 4 pizzas delivered: the vegetarian pizza was divided into 6; the chicken pizza divided into 10 pieces; the pepperoni pizza divided into 9 pieces; the ham and pineapple divided into 8. The table shows how many pieces of each pizza every child had. Work out who had most pizza.

Aysha had the most (1.44 pizzas), followed by John (1.3 pizzas) and Frances had the least (1.26 pizzas)

Sharing Toys

Three children shared 275 toy figures. There were 3 different figures: storm troopers; galaxy raiders; and space pioneers. From the table work out how many each had.

Harry had 80 (20 storm troopers, 40 galaxy raiders and 20 space pioneers)

Gill 75 (30 storm troopers, 15 galaxy raiders and 30 space pioneers)

Jem 120 (30 storm troopers, 30 galaxy raiders and 60 space pioneers)

Adding and Subtracting

When I add two mixed numbers together where the fractional values have different denominators, my answer is $4\frac{3}{8}$.

Give two examples of the numbers I added. **E.g. $2\frac{3}{4}$ and $3\frac{5}{8}$**

When I subtracted one mixed number from another where the fractions had different denominators, my answer was $3\frac{7}{8}$.

Give two examples of the numbers I subtracted. **E.g. $5\frac{1}{4} - 1\frac{3}{8}$ or $4\frac{1}{2} - 1\frac{5}{8}$**