

<b>Learning Objective:</b>	To add & subtract fractions	<b>Name:</b>	
		<b>Date:</b>	

**Do NOW Activity:**

<b>1</b>	What is the value of the number 3 in 8303.27	
<b>2</b>	Write $\frac{3}{5}$ as a percentage	
<b>3</b>	Work out $\frac{2}{5} \times \frac{3}{8}$	
<b>4</b>	What is the mode? -> 2 8 2 4 7 5 4 1 5	
<b>5</b>	Share £64 in the ratio 10:4:2	

**PRIOR KNOWLEDGE CHECK:**

1. I can use the four operations in calculations.

**THE MAIN EVENT**

**WORKED EXAMPLE #1:**

$$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

$$\frac{7}{10} - \frac{3}{10} = \frac{4}{10} = \frac{2}{5}$$

$$\frac{1}{8} + \frac{5}{8} = \frac{6}{8} = \frac{3}{4}$$

**PRACTICE #1:**

Simplify each of the following calculations.

(a)  $\frac{1}{5} + \frac{1}{5}$

(b)  $\frac{3}{11} + \frac{2}{11}$

(c)  $\frac{1}{9} + \frac{7}{9}$

(d)  $\frac{3}{7} + \frac{3}{7}$

(e)  $\frac{9}{11} - \frac{6}{11}$

(f)  $\frac{16}{21} - \frac{8}{21}$

(g)  $\frac{5}{6} - \frac{5}{6}$

(h)  $\frac{16}{25} - \frac{9}{25}$

**PRACTICE #1:**

Simplify each of the following calculations.

(a)  $\frac{2}{3} + \frac{2}{3}$

(b)  $\frac{4}{5} + \frac{3}{5}$

(c)  $\frac{7}{10} + \frac{4}{10}$

(d)  $\frac{3}{8} + \frac{5}{8}$

(e)  $\frac{9}{11} + \frac{10}{11}$

(f)  $\frac{9}{20} + \frac{13}{20}$

(g)  $\frac{8}{13} + \frac{6}{13}$

(h)  $\frac{41}{50} + \frac{19}{50}$

**WORKED EXAMPLE #2:**

$$\frac{1}{3} + \frac{3}{4} = \frac{4}{12} + \frac{9}{12} = \frac{13}{12} = 1\frac{1}{12}$$

x4    x3

$$\frac{8}{9} - \frac{5}{6} = \frac{48}{54} - \frac{45}{54} = \frac{3}{54} = \frac{1}{18}$$

x6    x9

**PRACTICE #3:**

Question 1: Work out the following additions and subtractions.  
Give your answers as simplified fractions.

(a)  $\frac{2}{5} + \frac{1}{2}$       (b)  $\frac{2}{7} + \frac{1}{2}$       (c)  $\frac{1}{3} + \frac{1}{2}$       (d)  $\frac{4}{5} - \frac{2}{3}$   
(e)  $\frac{8}{9} - \frac{1}{3}$       (f)  $\frac{2}{3} + \frac{1}{6}$       (g)  $\frac{3}{10} + \frac{2}{5}$       (h)  $\frac{3}{8} + \frac{1}{4}$   
(i)  $\frac{7}{15} - \frac{1}{5}$       (j)  $\frac{3}{4} - \frac{2}{5}$       (k)  $\frac{3}{10} + \frac{3}{8}$       (l)  $\frac{2}{5} + \frac{4}{7}$

**PRACTICE #4:**

Question 2: Work out the following additions.  
Give your answers as simplified fractions.  
If necessary, give any answers as mixed numbers.

(a)  $\frac{3}{4} + \frac{1}{2}$       (b)  $\frac{5}{9} + \frac{2}{3}$       (c)  $\frac{7}{10} + \frac{1}{3}$       (d)  $\frac{4}{5} + \frac{3}{4}$   
(e)  $\frac{19}{20} + \frac{4}{5}$       (f)  $\frac{5}{9} + \frac{13}{18}$       (g)  $\frac{5}{12} + \frac{9}{10}$       (h)  $\frac{4}{7} + \frac{7}{8}$

**Application**

Question 1: In a car park,  $\frac{2}{3}$  of the cars are red.

$\frac{1}{5}$  of the cars are blue.

What fraction of the cars are red or blue?

Question 2: This week Harry spent  $\frac{1}{2}$  of his pocket money on a ticket for a football match.

He also spent  $\frac{1}{8}$  of his pocket money on a scarf at the match.

(a) What fraction of his pocket money has Harry spent?

(b) What fraction of his pocket money does Harry have left?

Question 3: On an airplane, the passengers may have chicken, vegetable or tomato soup.  
Half of the passengers choose chicken soup  
A third of the passengers choose tomato soup.

(a) What fraction of the passengers choose vegetable soup?

There are 240 passengers on the airplane.

(b) How many passengers choose vegetable soup?