



# Colin and Coco's Daily Maths Workout

Workout 6.1 & 6.2

Answers





## Workout A

## Fraction Workout

You may need to work these out on another piece of paper.

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

$\frac{7}{12}$

$\frac{2}{3} + \frac{1}{4} =$

$\frac{11}{12}$

$\frac{2}{3} - \frac{1}{4} =$

$\frac{5}{12}$

$\frac{1}{5} + \frac{1}{4} =$

$\frac{9}{20}$

$\frac{2}{5} + \frac{1}{4} =$

$\frac{13}{20}$

$\frac{2}{5} - \frac{1}{4} =$

$\frac{3}{20}$

$\frac{1}{3} + \frac{1}{5} =$

$\frac{8}{15}$

$\frac{2}{3} - \frac{1}{5} =$

$\frac{7}{15}$

$\frac{2}{3} - \frac{3}{5} =$

$\frac{1}{15}$

$\frac{1}{3} + \frac{1}{2} =$

$\frac{5}{6}$

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

$\frac{1}{12}$

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

$\frac{7}{20}$

## Workout B

## Fraction Workout

You may need to work these out on another piece of paper.

$3\frac{4}{8}$

$= 1\frac{3}{8} + 2\frac{1}{8}$

$5\frac{7}{20}$

$= 2\frac{3}{5} + 2\frac{3}{4}$

$1\frac{7}{12}$

$= 2\frac{5}{6} - 1\frac{1}{4}$

$3\frac{7}{8}$

$= 1\frac{1}{8} + 2\frac{3}{4}$

$4\frac{1}{15}$

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

$\frac{11}{15}$

$= 2\frac{2}{5} - 1\frac{2}{3}$

$3\frac{5}{6}$

$= 2\frac{1}{6} + 1\frac{2}{3}$

$1\frac{5}{6}$

$= 2\frac{5}{6} - 1\frac{1}{6}$

$1\frac{5}{6}$

$= 3\frac{1}{6} - 1\frac{1}{3}$

$3\frac{19}{20}$

$= 1\frac{1}{5} + 2\frac{3}{4}$

$\frac{4}{5}$

$= 2\frac{2}{5} - 1\frac{3}{5}$

$\frac{13}{20}$

$= 2\frac{2}{5} - 1\frac{3}{4}$

## Workout C

## Fraction Workout

You may need to work these out on another piece of paper.

$3\frac{3}{5} + 2\frac{1}{4} =$

$5\frac{17}{20}$

$2\frac{2}{5} + 1\frac{3}{4} =$

$4\frac{3}{20}$

$3\frac{2}{3} + 2\frac{3}{4} =$

$6\frac{5}{12}$

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

$3\frac{13}{15}$

$2\frac{2}{3} + 2\frac{4}{5} =$

$5\frac{7}{15}$

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

$5\frac{20}{21}$

$3\frac{4}{6} - 1\frac{1}{6} =$

$2\frac{3}{6}$

$2\frac{5}{6} - 1\frac{1}{3} =$

$1\frac{3}{6}$

$2\frac{5}{8} - 1\frac{3}{4} =$

$\frac{7}{8}$

$2\frac{3}{5} - 1\frac{4}{5} =$

$\frac{4}{5}$

$3\frac{1}{3} - 1\frac{2}{3} =$

$1\frac{2}{3}$

$3\frac{2}{5} - 1\frac{3}{4} =$

$1\frac{13}{20}$



# Biggest Wins - A Fraction Game

Workout D

You need:

1 - 10 cards (At the back of the pack)

To play:

Shuffle the cards.

Deal four cards to each player.

Each player makes two proper fractions then adds them to find a total.

The player with the largest total scores a point.

To win:

The winner is the first player to score five points.

Play again, but make improper fractions this time.



# Missing Number Workout

Workout E

Solve each calculation in at least four different ways.  
(The missing numbers could have 2 digits)

Possible  
Solution

$$2\frac{1}{\boxed{2}} + 2\frac{1}{\boxed{4}} = 4\frac{3}{\boxed{4}}$$

$$2\frac{1}{\boxed{3}} + 2\frac{1}{\boxed{9}} = 4\frac{4}{\boxed{9}}$$

Find the missing digits.

Solve each calculation in several ways if possible.

$$3\frac{\boxed{1}}{6} - 1\frac{2}{\boxed{3}} = 1\frac{1}{\boxed{2}}$$

$$3\frac{\boxed{4}}{5} - 1\frac{\boxed{9}}{10} = 1\frac{9}{\boxed{10}}$$

$$2\frac{3}{\boxed{6}} + \frac{\boxed{7}}{\boxed{8}} = 3\frac{3}{8}$$

Solve all calculations together using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9  
once each.



# Book Shelf Challenge

Workout F

Colin is sorting his books out and is filling shelves in a very organised way. The table shows the type of books and the fraction of shelves that are filled.

Books	Fraction of shelves filled
Stories about explorers	$1\frac{2}{3}$
Astronomy books	$1\frac{3}{4}$
Recipe books	$1\frac{4}{5}$
Keep Fit books	$1\frac{5}{6}$

What is the difference between the fractions of shelves filled by different types of books?

What do you notice?

		Difference
Stories	Astronomy	$\frac{1}{12}$
Stories	Recipe	$\frac{2}{15}$
Stories	Keep Fit	$\frac{1}{6}$
Astronomy	Recipe	$\frac{1}{20}$
Astronomy	Keep Fit	$\frac{1}{12}$
Recipe	Keep Fit	$\frac{1}{30}$

Investigate further:

Possible Solutions

Find two mixed numbers with different denominators that have a

difference of  $\frac{1}{10}$       $3\frac{1}{2}$       $3\frac{4}{10}$

$\frac{1}{9}$       $5\frac{2}{3}$       $5\frac{5}{9}$

$\frac{1}{8}$       $7\frac{7}{8}$       $7\frac{3}{4}$



## Word Problem Workout

Colin is having a party.

He has  $\frac{3}{5}$  kg of Caribou nuts in one bag and  $\frac{3}{4}$  kg of Caribou nuts in another bag.

What weight of Caribou nuts does he have in total?  $1\frac{7}{20}$

Colin has taken up jogging.

He jogs  $3\frac{3}{4}$  km on Saturday and  $2\frac{2}{3}$  km on Sunday.

How far did he jog in total?  $6\frac{3}{12}$

How much further did he jog on Saturday than Sunday?  $1\frac{1}{12}$

Colin weighs  $165\frac{2}{3}$  kg.

Coco weighs  $\frac{5}{8}$  kg.

What is the difference between their weights?  $165\frac{1}{24}$

Colin has a long journey to make.

He travels  $\frac{3}{8}$  of the journey, has a break then travels  $\frac{1}{3}$  of the journey.

What fraction of the journey does he have left to travel?  $\frac{7}{24}$

Coco is making a fruit punch. She pours in  $1\frac{2}{3}$  litres of Tropical juice,  $\frac{4}{5}$  litres of Lemonade.

How much fruit punch has Coco made so far?  $2\frac{7}{15}$

How much more Tropical Juice than lemonade does she use?  $\frac{13}{15}$

Create your own problem for  $2\frac{1}{4}$  subtract  $1\frac{1}{3}$



# 1 - 20 Workout

Workout H

Using the digits from today's date create all the numbers from 1 - 20. You can use any or all of the four operations. You must use all the digits every time.

Example: 27/3/20 (27th March)

1	11	
2	12	
3	13	$7 \times 2 = 14$ $3 - 2 - 0 = 1$ $14 - 1 = 13$
4	14	$7 + 2 - 3 - 2 - 0 = 4$
5	15	
6	16	$7 + 3 - 2 - 2 - 0 = 6$
7	17	
8	18	
9	19	$7 \times 2 - 3 - 2 - 0 = 9$
10	20	



# Colin and Coco's Daily Maths Workout

## Workout 6.2

Fractions, Decimals and  
Percentages







# Fraction, Decimal, Percentage Workout

Workout A

Decimal to fraction

Fraction to decimal

Fraction to percentage

$0.5 = \frac{1}{2}$

$\frac{3}{4} = 0.75$

$\frac{1}{4} = 25\%$

$0.25 = \frac{1}{4}$

$\frac{3}{5} = 0.6$

$\frac{2}{5} = 40\%$

$0.4 = \frac{4}{10}$

$\frac{3}{10} = 0.3$

$\frac{7}{10} = 70\%$

$0.1 = \frac{1}{10}$

$\frac{4}{5} = 0.8$

$\frac{3}{4} = 75\%$

# Fraction, Decimal, Percentage Workout

Workout B

Decimal to fraction

Fraction to decimal

Fraction to percentage

$\frac{3}{10} = 0.3$

$0.8 = \frac{4}{5}$

$40\% = \frac{2}{5}$

$\frac{45}{100} = 0.45$

$0.9 = \frac{9}{10}$

$30\% = \frac{3}{10}$

$\frac{17}{100} = 0.17$

$0.31 = \frac{31}{100}$

$53\% = \frac{53}{100}$

$\frac{8}{100} = 0.08$

$0.04 = \frac{4}{100}$

$7\% = \frac{7}{100}$

# Fraction, Decimal, Percentage Workout

Workout C

Insert >, = or <

$\frac{1}{9} < \frac{1}{8}$

$\frac{5}{6} > \frac{2}{3}$

$\frac{9}{10} > \frac{9}{11}$

$\frac{9}{10} > \frac{4}{5}$

$\frac{5}{6} > \frac{5}{7}$

$\frac{2}{3} > \frac{4}{7}$

$\frac{4}{5} = 0.8$

$\frac{7}{50} = 0.14$

$\frac{2}{5} > 25\%$

$0.7 < \frac{3}{4}$

$0.07 < 60\%$

$0.3 < 35\%$



# Plot It - A Fraction Game

Workout D

You need:

1 - 10 cards (At the back of the pack)

0 - 1 blank number line

To play:

Shuffle the cards and place them in a deck face down.

Player 1: Pick two cards from anywhere in the deck.

Make a proper fraction. Plot your fraction approximately on the number line.

Replace the cards in the deck and shuffle it.

Player 2: Pick two cards from anywhere in the deck.

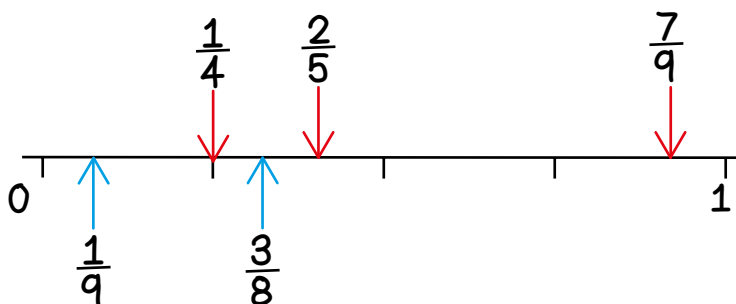
Make a proper fraction. Plot your fraction approximately on the number line.

Continue taking turns to make and plot fractions.

To win:

The winner is the first player to plot four points without their opponent's points in between.

For example: After 3 turns for player 1 and 2 turns for player 2 it could look like the diagram below.





# Missing Number Workout

Workout E

Find the missing digits.

$$\frac{A}{B} < \frac{2}{3}$$

A and B are digits.

A is an even number, B is an odd number.

Find all the possible solutions.  $\frac{2}{5}$   $\frac{2}{7}$   $\frac{4}{7}$   $\frac{2}{9}$   $\frac{4}{9}$

Find the missing numerators and denominators in the following fractions.

The fractions are in order from smallest to largest.

Each letter represents a different number from 1 to 10.

$$\frac{A}{B} \quad \frac{C}{D} \quad \frac{E}{F} \quad \frac{G}{H} \quad \frac{I}{J}$$

Possible  
Solution

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

Solve this puzzle in several different ways.

Another  
Solution

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



# Comparing Fractions, Decimal and Percentages Workout

Put a different unit fraction in each square so that the fractions get smaller as you travel right and down across the grid. (Unit fractions have 1 as their numerator.)

**Possible Solution**

Largest  $\longrightarrow$

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

$\downarrow$

Smallest

Fill the grid as described, so that the fractions and decimals get smaller as you travel right and down across the grid.

**Possible Solution**

Largest  $\longrightarrow$

$\frac{3}{4}$	$\frac{3}{5}$	$\frac{3}{7}$
0.5	0.32	0.31
$\frac{2}{8}$	$\frac{2}{9}$	$\frac{2}{10}$

$\downarrow$

Three non-unit fractions with different denominators in this row.

Three decimals in this row.

Three non-unit fractions with different denominators in this row.

Smallest



## Word Problem Workout

Workout G

For the following four statements, in each case work out which you would rather and say why.

Have  $\frac{2}{3}$  kg,  $\frac{4}{7}$  kg or  $\frac{5}{9}$  kg of chocolate

Depends on the reason, e.g.  
I prefer  $\frac{5}{9}$  kg because I don't like chocolate

Run  $\frac{2}{8}$  km,  $\frac{3}{7}$  km or  $\frac{2}{9}$  km.

I prefer  $\frac{3}{7}$  km because I like to run  
etc

Drink  $\frac{4}{9}$  litre,  $\frac{1}{3}$  litre or  $\frac{2}{5}$  litre of orange juice.

Read  $\frac{2}{5}$ ,  $\frac{1}{3}$  or 37% of a good book.

On the packet of Colin's favourite biscuits it lists the nutrition information.  
Sugars 26%.

Fat 3g per 12g biscuit.

Which is there more of, sugars or fat? **Sugars**

Two shops are having a sale.

Shop A advertises 35% off.

Shop B advertises  $\frac{1}{3}$  off.

Which shop offers the better deal and how do you know? **35% because  $\frac{1}{3} = 33\frac{1}{3}\%$**

Colin and Coco sit the same test.

Colin gets 80%.

Coco gets 17 out of 20.

Who had the better test result? **Coco**

Create your own problems for 30% compared to  $\frac{1}{3}$



# 1 - 20 Workout

Workout H

Using the digits from today's date create all the numbers from 1 - 20. You can use any or all of the four operations. You must use all the digits every time.

Example: 03/4/20 (3rd April)

1	11	
2	12	
3	13	
4	14	$3 \times 4 = 12$ $2 + 0 = 2$ $12 + 2 = 14$
5	15	$3 + 4 - 2 + 0 = 5$
6	16	
7	17	
8	18	
9	19	$3 + 4 + 2 + 0 = 9$
10	20	



# 1 - 10 Cards

1

2

3

4

5

6

7

8

9

10