CanDoMaths Daily Workout

Dear Parent/Carer

Welcome to the CanDoMaths Daily Workout resource pack.

All the resources have been designed to help your child practise the maths topics they have learnt this year and make sure their maths skills stay healthy and strong.

Colin and Coco both know that deliberate practice is really important. Coco likes to say *'Practice makes permanent'*; Colin prefers *'Practice keeps me skilled'*.

This pack focuses on practising some **Fraction, Decimal and Percentage** Skills.

There are three types of Workouts for your child to practise:

1) 'Do It' questions (Workouts A, B and C)
   Find the answer to show they can still 'Do' the skill.
2) Problems to solve (Workouts D, E, F and G)
   Word problems, empty box problems and puzzles with lots of possibilities to show they can apply the skill.
3) Exploring facts for the week (Workout H)
   Choose the number of the date for Workouts 1 – 3, use the digits in the date for Workouts 4 – 6.

The idea is that you pick one or two Workouts for your child to complete each day – for example one 'Do It' and one 'Problem' Workout or just one 'Problem'. The CanDoMaths Gang (Liz and Steve) will provide a short video with guidance and hints for each pack on our YouTube Channel. Answers will also be shared via Twitter @MathsCanDo starting with the first activity on Monday 23rd March. The weekly plan followed will be:

Monday: Workouts A and D
Tuesday: Workout E
Wednesday: Workouts B and F
Thursday: Workouts C and G
Friday: Workout H

If you wish to do more practice, here is a list of some of Colin and Coco's favourite maths games and websites ….

Hit the Button www.topmarks.co.uk/maths-games/hit-the-button

Practise solve word problems using the Bar Model:
www.mathplayground.com/thinkingblocks.html

Maths Games

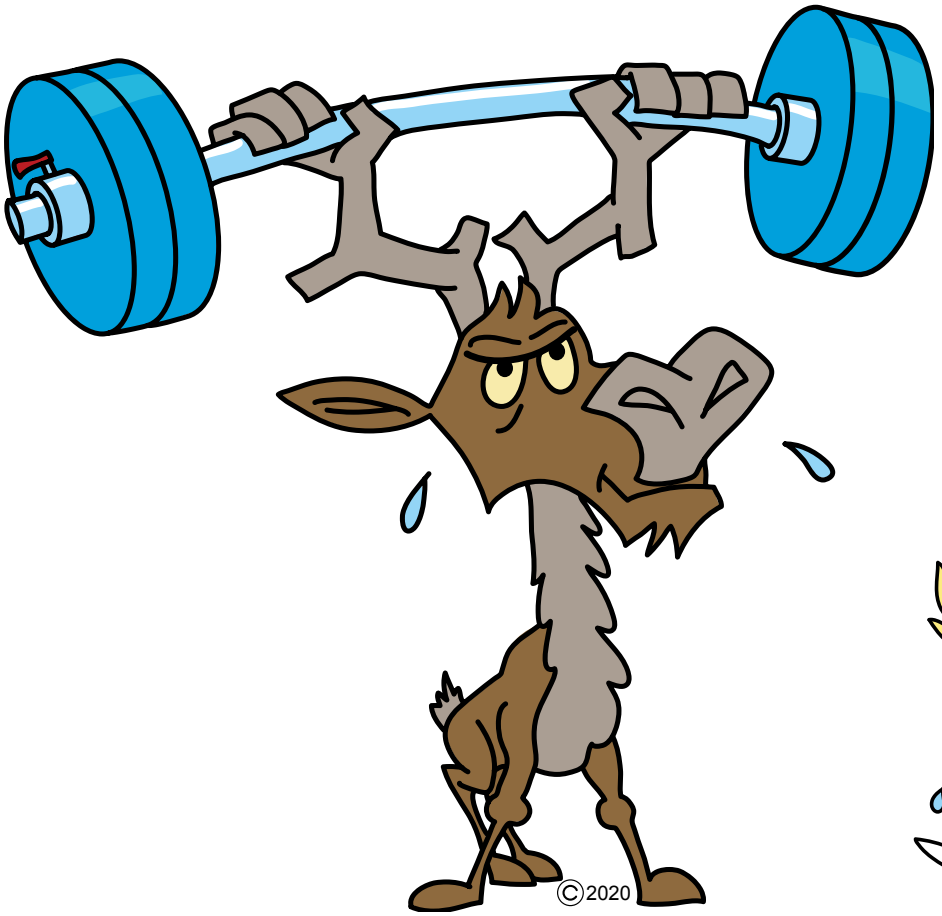
www.mathplayground.com/index_addition_subtraction.html
www.mathplayground.com/index_multiplication_division.html
www.mathplayground.com/index_fractions.html

NRich Games for Lower Primary nrich.maths.org/9412
NRich Interactives Lower Primary nrich.maths.org/9414
NRich Games for Upper Primary nrich.maths.org/9413
NRich Interactives Upper Primary nrich.maths.org/9415

Colin and Coco's Daily Maths Workout

Workout 6.1

Fraction Addition and Subtraction



Workout A

Fraction Workout

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

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

Workout B

Fraction Workout

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

$=1\frac{3}{8}+2\frac{1}{8}$	$=2\frac{3}{5}+2\frac{3}{4}$	$=2\frac{5}{6}-1\frac{1}{4}$
$=1\frac{1}{8}+2\frac{3}{4}$	$=1\frac{2}{3}+2\frac{2}{5}$	$=2\frac{2}{5}-1\frac{2}{3}$
$=2\frac{1}{6}+1\frac{2}{3}$	$=2\frac{5}{6}-1\frac{1}{6}$	$=3\frac{1}{6}-1\frac{1}{3}$
$=1\frac{1}{5}+2\frac{3}{4}$	$=2\frac{2}{5}-1\frac{3}{5}$	$=2\frac{2}{5}-1\frac{3}{4}$

Workout C

Fraction Workout

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

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

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)

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

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

Find the missing digits.

Solve each calculation in several ways if possible.

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

$$3\frac{\square}{\square} - 1\frac{\square}{10} = 1\frac{9}{1\square}$$

$$2\frac{3}{\square} - \frac{\square}{\square} = 3\frac{3}{8}$$

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?

Investigate further:

Find two mixed numbers with different denominators that have a difference of $\frac{1}{10}$

$\frac{1}{9}$

$\frac{1}{8}$

Word Problem Workout

Workout G

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?

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?
How much further did he jog on Saturday than Sunday?

Colin weighs $165\frac{2}{3}$kg.
Coco weighs $\frac{5}{8}$ kg.
What is the difference between their weights?

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?

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?
How much more Tropical Juice than lemonade does she use?

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

1 - 20 Workout

Workout H

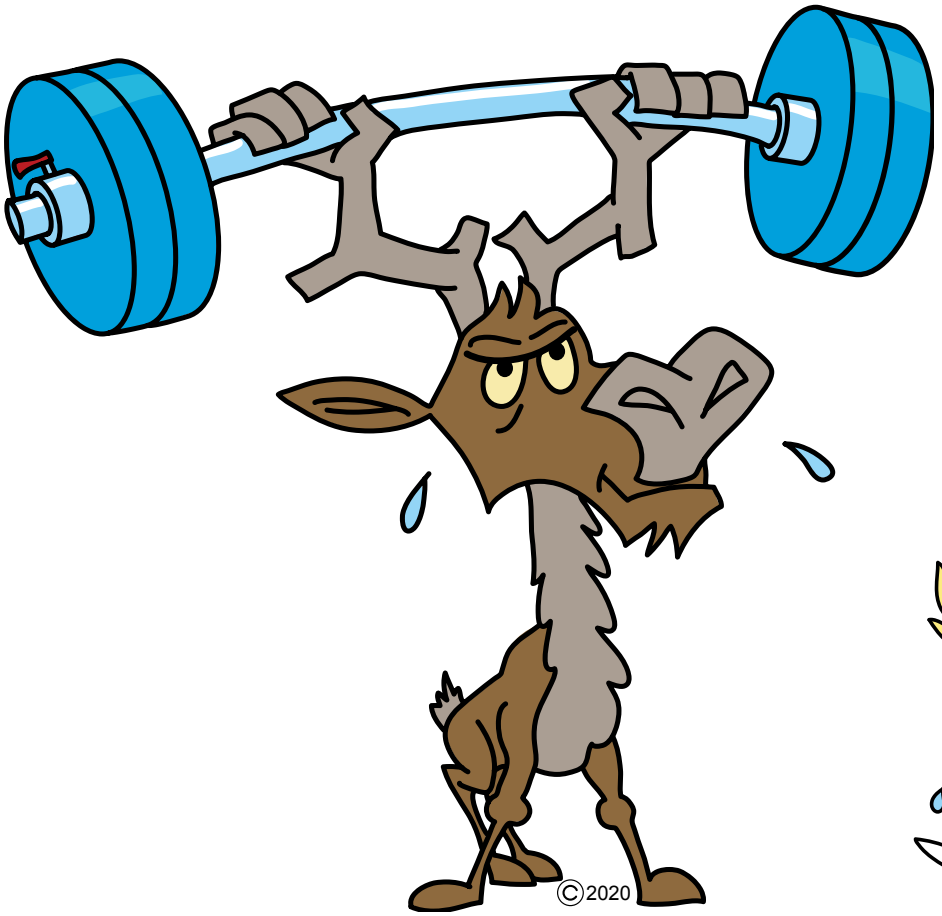
Using the digits from today's date create all the numbers from 1 - 20. You can use any or all of the four operations. You must use all the digits every time.

1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
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
$0.5 =$ ☐	$\frac{3}{4} =$ ☐	$\frac{1}{4} =$ ☐
$0.25 =$ ☐	$\frac{3}{5} =$ ☐	$\frac{2}{5} =$ ☐
$0.4 =$ ☐	$\frac{3}{10} =$ ☐	$\frac{7}{10} =$ ☐
$0.1 =$ ☐	$\frac{4}{5} =$ ☐	$\frac{3}{4} =$ ☐

Fraction, Decimal, Percentage Workout

Workout B

Decimal to fraction	Fraction to decimal	Fraction to percentage
☐ $= 0.3$	☐ $= \frac{4}{5}$	☐ $= \frac{2}{5}$
☐ $= 0.45$	☐ $= \frac{9}{10}$	☐ $= \frac{3}{10}$
☐ $= 0.17$	☐ $= \frac{31}{100}$	☐ $= \frac{53}{100}$
☐ $= 0.08$	☐ $= \frac{4}{100}$	☐ $= \frac{7}{100}$

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.

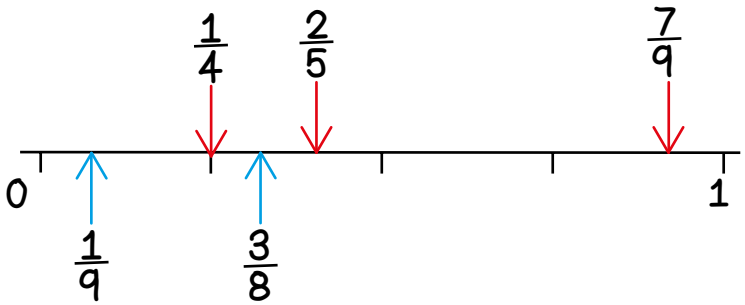
Player 2: Pick two cards from anywhere in the deck.

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.

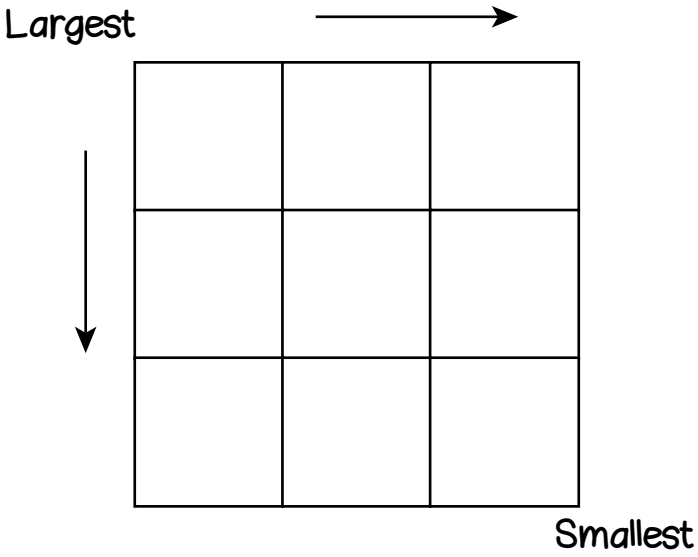
Find the missing numerators and denominators in the following fractions.
The fractions are in order from smallest to largest.
Each letter represents a different number from 1 to 10.

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

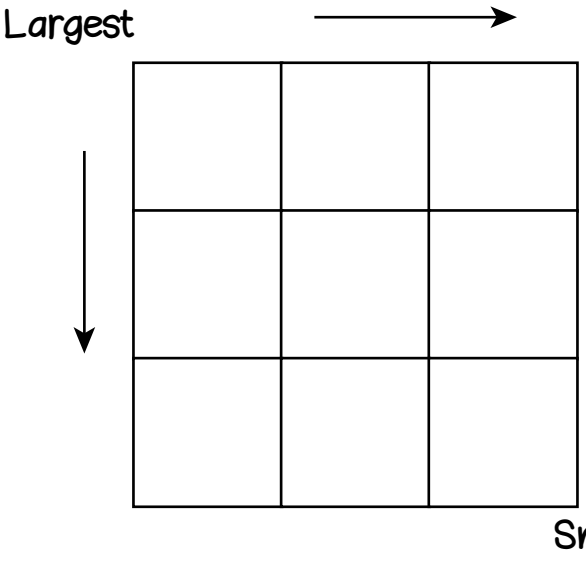
Solve this puzzle in several different ways.

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.)



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



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.

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 choclate

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

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?

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?

Colin and Coco sit the same test.
Colin gets 80%.
Coco gets 17 out of 20.
Who had the better test result?

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.

1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
10	20

1 - 10 Cards

1

2

3

4

5

6

7

8

9

10