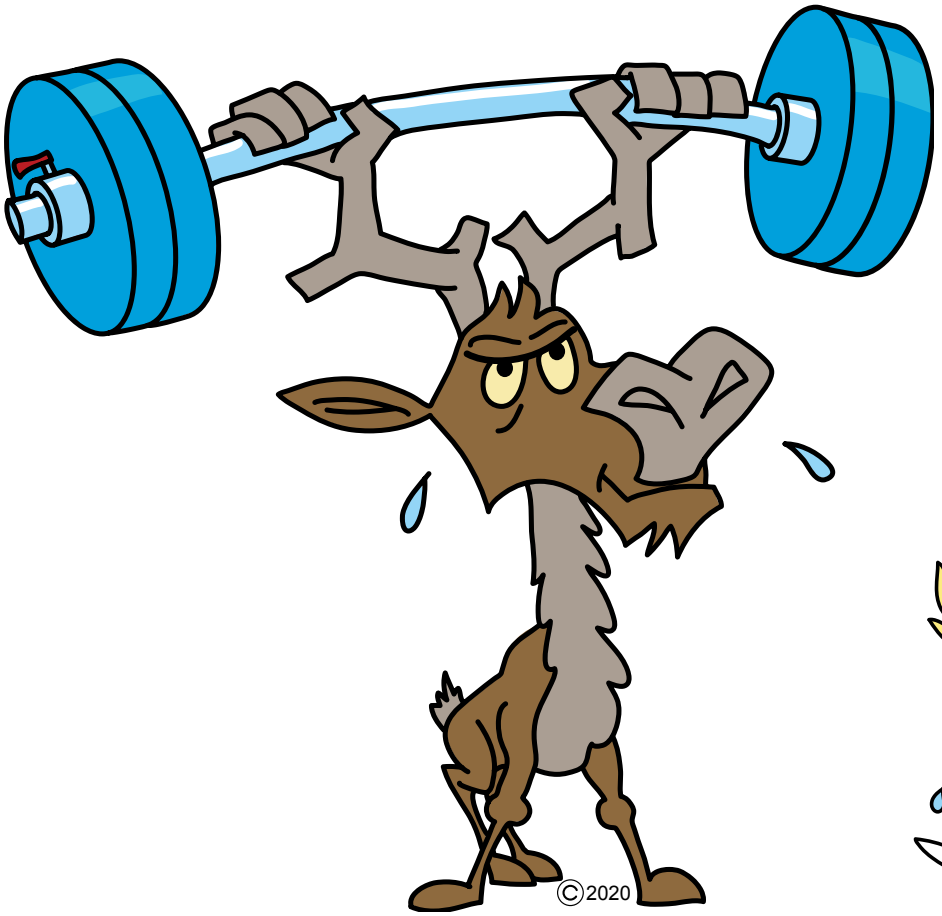
Colin and Coco's Daily Maths Workout

Workout 6.4

Fractions: Representing and Equivalence





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Fractions: Workout

Workout A

Compare the fractions using < , > or =

$\frac{3}{7} \bigcirc \frac{2}{8}$	$\frac{8}{9} \bigcirc \frac{4}{3}$	$\frac{10}{8} \bigcirc \frac{5}{4}$	$\frac{7}{3} \bigcirc \frac{6}{4}$
$\frac{5}{6} \bigcirc \frac{4}{9}$	$\frac{5}{4} \bigcirc \frac{7}{10}$	$\frac{2}{2} \bigcirc 2$	$\frac{5}{6} \bigcirc \frac{12}{10}$
$\frac{6}{7} \bigcirc \frac{5}{8}$	$\frac{8}{9} \bigcirc \frac{3}{2}$	$\frac{12}{4} \bigcirc \frac{8}{3}$	$\frac{10}{3} \bigcirc \frac{7}{2}$
$\frac{7}{8} \bigcirc \frac{8}{9}$	$\frac{7}{6} \bigcirc \frac{11}{12}$	$\frac{9}{3} \bigcirc \frac{15}{5}$	$\frac{15}{10} \bigcirc 1\frac{4}{9}$

Fractions: Workout

Workout B

Put the fractions in order from smallest to largest.

$\frac{3}{5}\ \frac{3}{4}, \frac{5}{8}$	$\frac{3}{8}, \frac{3}{7}, \frac{5}{4}$	$\frac{7}{8}, \frac{5}{2}, \frac{1}{2}, \frac{2}{5}$
$\frac{1}{3}, \frac{4}{5}, \frac{4}{9}$	$\frac{5}{9}, \frac{5}{10}, \frac{8}{7}$	$\frac{10}{9}, \frac{6}{4}, 1\frac{7}{12}, \frac{4}{3}$
$\frac{7}{8}, \frac{7}{9}, \frac{2}{4}$	$\frac{7}{9}, \frac{7}{6}, \frac{7}{12}$	$\frac{3}{2}, \frac{5}{4}, \frac{4}{3}, \frac{6}{5}$
$\frac{4}{5}, \frac{7}{12}, \frac{4}{6}$	$\frac{9}{9}, \frac{9}{12}, \frac{7}{10}$	$\frac{6}{4}, \frac{11}{10}, \frac{15}{12}, 1\frac{8}{9}$

Fractions: Workout

Workout C

Complete the tables.

Fraction	Decimal	Percentage
$\frac{3}{100}$		
$\frac{13}{100}$		
	0.17	
		9%
		23%

Fraction	Decimal	Percentage
$\frac{1}{4}$		
$\frac{1}{5}$		
		75%
	0.5	
$\frac{3}{10}$		

Fraction	Decimal	Percentage
$\frac{3}{20}$		
$\frac{8}{40}$		
		12.5%
	0.375	
$\frac{1}{3}$		

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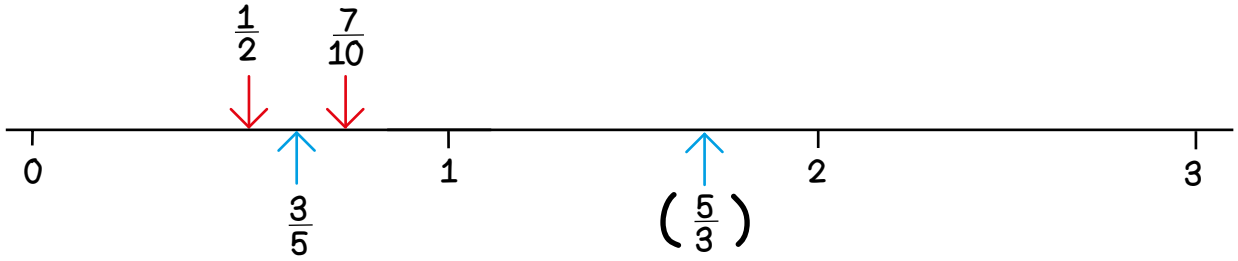
Plotting Fractions (2) Game

Workout D

You need:
1 - 9 Cards (at the back of the pack)
A blank 0 - 1 number line

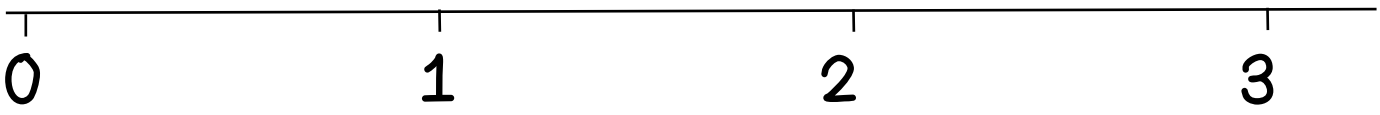
To play:
Shuffle the cards and put them in a deck face down.
Take it in turns to turn over two cards.
Decide which number to use as the numerator and which number to use as the denominator to make an improper or proper fraction.
Plot your fraction approximately on the number line, convincing your opponent how you know where to plot it.

I have turned over $\frac{3}{5}$ so I plot it between $\frac{1}{2}$ and $\frac{7}{10}$ because it is larger than $\frac{1}{2}$ but smaller than $\frac{7}{10}$
I could have plotted $\frac{5}{3}$ instead.



Place the cards back into the deck.

To win:
The winner is the first player to plot 4 fractions without any of their opponent's fractions in between.



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Missing Number Workout

Workout E

Place digits in the empty boxes to make the statements true.
Complete each one in several different ways.

$$\frac{\square}{\square} = \square\square\%$$

$$4\square\% = \frac{\square}{\square 0}$$

$$\frac{\square 6}{\square 00} = 0.9\square$$

Are there any boxes that it is impossible to put a 7 in?
Why?

Are there any boxes that could have any of the digits in them?

Now complete it using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once each.

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Equivalent Puzzles

Workout F

By using your knowledge of equivalence between decimals and fractions solve the following logic puzzles.

Two boys and two girls sit a test.
The marks they achieve are 65%, 43%, 83% and 72%.
Carl did better than Bob.
Deb got more than $\frac{4}{5}$ correct.
Alice had fewer than $\frac{9}{20}$ correct.

Name	Mark
Alice	
Bob	
Carl	
Deb	

Four boys go walking and jogging.
Billy jogs twice as far as he walks.
Archie jogs less than he walks.
Dave walks the same distance as he jogs.
Charlie walks further than Dave walks.

The distances walked are 0.5km, 0.35km, 0.8 km and 0.85km

The distances jogged are $\frac{4}{5}$ km, $\frac{2}{5}$ km, $\frac{3}{4}$ km and $\frac{7}{10}$ km.

How far did each boy walk and jog?

Name	Walk	Jog
Archie		
Billy		
Charlie		
Dave		

Write your own fraction and decimal logic puzzle.

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Word Problem Workout

Workout G

Coco climbs $\frac{3}{8}$ of the way up the mountain.
Colin climbs 30% of the way up the mountain.
Who has climbed further up the mountain?

Colin eats 85% of his cake. Coco eats $\frac{7}{8}$ of her cake.
Who has eaten more of their cake?

Coco has three ribbons. The blue one is $\frac{4}{9}$ m long.
The red ribbon is 0.4m long and the green ribbon is $\frac{4}{11}$ m long.
Put the ribbons in order of length, from shortest to longest.

In a maths test Coco gets 24 out of 30 correct.
Colin gets 85% correct. Who has the higher mark?

Coco is making a cake.
The cake needs $\frac{2}{7}$ kg of flour. It needs 25% of a kilogram of margarine and 0.3kg of sugar.
Put the three ingredients in order of the amount needed, from least to most.

Create your own problems to compare or order fractions.

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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

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Cards for the Games

1	2	3
4	5	6
7	8	9

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