Colin and Coco's Daily Maths Workout

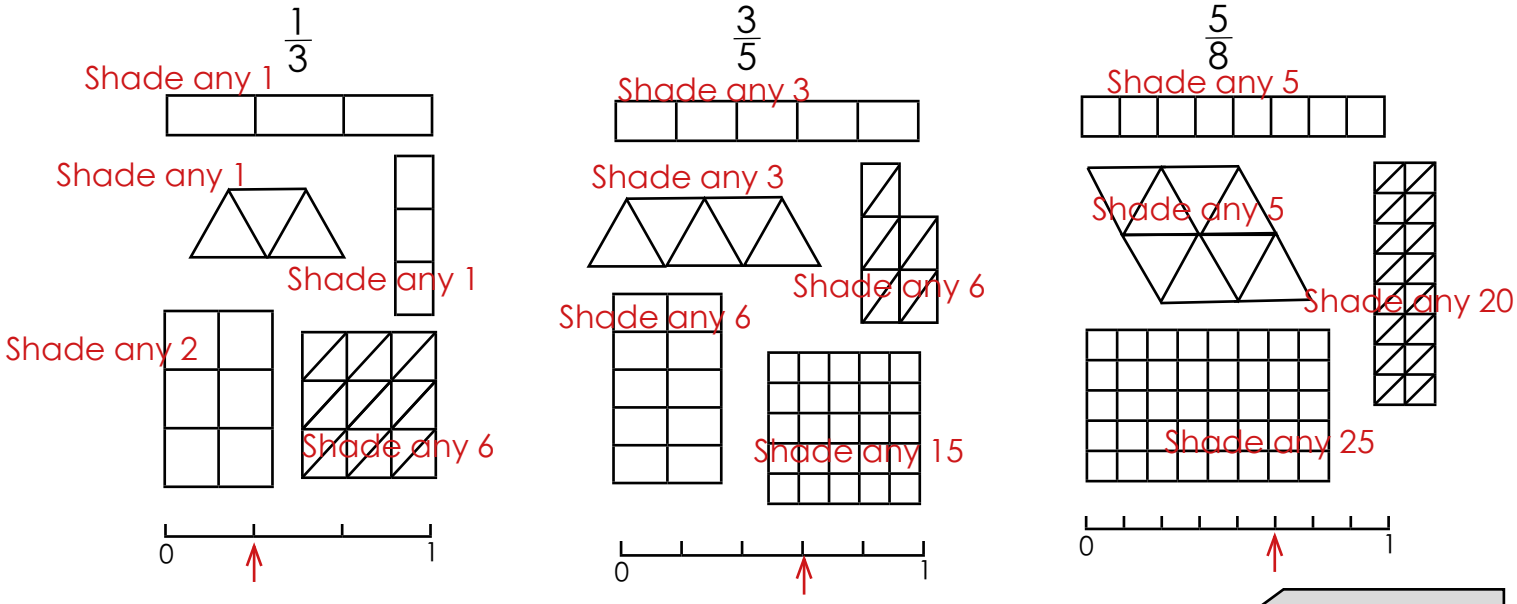
Workout 3.4 Answers

Fractions: Representing and Equivalence

Fractions Workout

Workout A

Represent each fraction in different ways using the diagrams and number line.



Fractions Workout

Workout B

Put the fractions in order from smallest to largest.

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

Fractions Workout

Workout C

Find the missing numbers.

$\frac{1}{3} = \frac{2}{6}$	$\frac{1}{5} = \frac{2}{10}$	$\frac{1}{2} = \frac{4}{8}$	$\frac{2}{3} = \frac{8}{12}$
$\frac{1}{3} = \frac{3}{9}$	$\frac{1}{5} = \frac{3}{15}$	$\frac{1}{8} = \frac{2}{16}$	$\frac{3}{8} = \frac{15}{40}$
$\frac{1}{3} = \frac{5}{15}$	$\frac{5}{25} = \frac{1}{5}$	$\frac{1}{4} = \frac{2}{8}$	$\frac{32}{40} = \frac{4}{5}$
$\frac{10}{30} = \frac{1}{3}$	$\frac{1}{5} = \frac{10}{50}$	$\frac{5}{40} = \frac{1}{8}$	$\frac{6}{8} = \frac{18}{24} = \frac{3}{4}$

Equivalent Fractions Game

Workout D

You need:
Fraction Cards (at the bottom of this page.)
Equivalent Fractions Board (next page.)
Pen/pencil/counters

To play:
Shuffle the cards and put them in a deck face down.
Take it in turns to turn over a card.
Calculate an equivalent fraction (You can not choose the fraction itself,) and colour/cover the numerator and denominator anywhere on the board. The numbers do not need to be next to each other.

I have turned over $\frac{1}{4}$ so I could make $\frac{2}{8}$ or $\frac{3}{12}$ or $\frac{4}{16}$ ...and so on.
I choose to colour a 3 and a 12 on the board.

If you can not go it is the next player's turn.
Place the card back into the deck.

To win:
The winner is the first player to colour 5 in a line, next to each other, horizontally, vertically or diagonally.

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

$\frac{3}{8}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{2}{5}$

Equivalent Fractions Board

2	3	9	6	4	10	3	2
20	4	3	12	40	8	6	5
12	5	24	4	8	3	25	2
5	16	4	2	9	4	40	4
2	6	12	30	6	2	12	20
3	4	8	4	24	8	10	5
18	15	4	16	2	10	8	15
2	3	10	6	3	30	15	2

Missing Number Workout

Workout E

Put digits in the empty boxes to make sets of equivalent fractions.
Complete each one in several different ways.

Possible Solution

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

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

$$\frac{\boxed{7}}{1\boxed{4}} = \frac{1}{\boxed{2}}$$

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

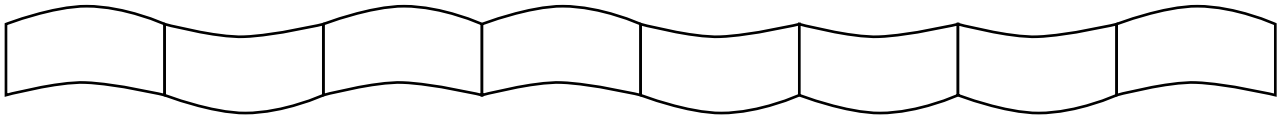
Are there any boxes that could have any of the digits in them?

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

Scarf Challenge

Workout F

Coco is knitting a scarf for Colin.
She wants to draw a plan for the scarf before she starts knitting.



She has three colours and plans to knit a fraction of the scarf in each colour.

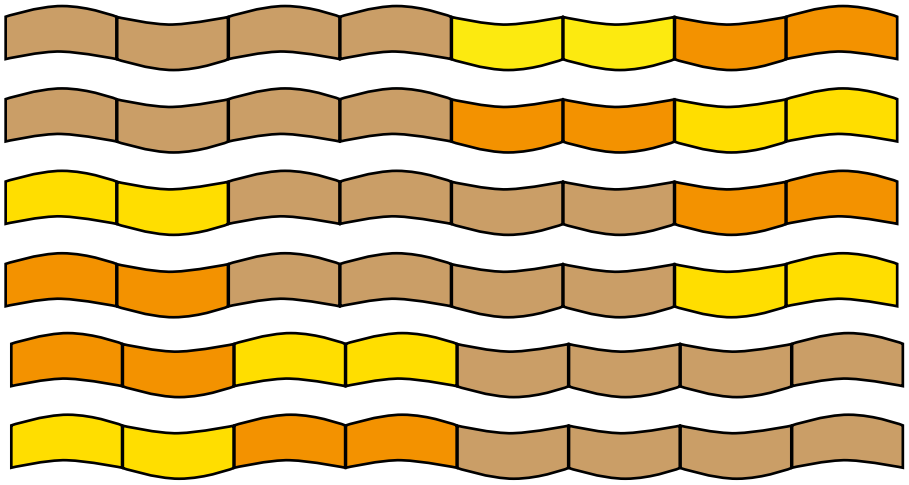
Once she starts a colour, she keeps knitting with that colour until it is finished, to save having too many joins.

$\frac{1}{2}$ of the scarf is going to be brown. (Colin's favourite colour.)

$\frac{1}{4}$ of the scarf is going to be yellow.

$\frac{2}{8}$ of the scarf is going to be orange.

Investigate the possible designs if she is happy to split one of the colours into two separate sections.



Investigate the possible designs if $\frac{1}{2}$ is brown, $\frac{2}{5}$ is yellow and $\frac{1}{10}$ is orange.

Word Problem Workout

Workout G

Coco climbs $\frac{1}{5}$ of the way up the mountain.
Colin climbs $\frac{1}{8}$ of the way up the mountain.

Who has climbed further up the mountain?

Coco

Colin eats $\frac{3}{5}$ of his cake. Coco eats $\frac{3}{4}$ of her cake.
Who has eaten more of their cake?

Coco

Colin paves $\frac{2}{5}$ of his patio with white slabs.
He paves $\frac{3}{10}$ of his patio with grey slabs.
Are there more white slabs or grey slabs?

white slabs

Coco shades $\frac{2}{5}$ of a shape in red.
Colin shades $\frac{4}{10}$ of the same shape in blue.
Which colour is there more of?

The same - fractions are equivalent

Coco is making a fruit salad.
$\frac{5}{8}$ of the salad is apples. Oranges make up $\frac{1}{8}$ of the salad.
Bananas make up $\frac{2}{8}$ of the salad.
Put the fruit in order of quantity in the salad, from most to least.

apples, bananas, oranges

Create your own problems to compare or add fractions.

Workout H

Number of the Day Workout

Today's number is

Write it in words

Draw It

Double It

Halve It

List its factors

List some multiples

10 more

10 less

Calculation so it is the difference.

Calculation so it is the total.