Colin and Coco's Daily Maths Workout

Workout 3.12

KeeP-uppI (Term 5)

KPIs for Term 5

Calculate fractions of amounts
Add and subtract fractions with the same denominator
Tell the time to the nearest minute
Calculate durations of events

Workout A

Fractions of Amounts Workout

Maybe use a bar model, with jottings, to solve these.

$\frac{1}{5}$ of 30 = ☐	$\frac{1}{8}$ of 24 = ☐	$\frac{1}{3}$ of 21 = ☐	$\frac{1}{10}$ of 70 = ☐
$\frac{2}{5}$ of 30 = ☐	$\frac{3}{8}$ of 24 = ☐	$\frac{2}{3}$ of 21 = ☐	$\frac{3}{10}$ of 80 = ☐
$\frac{4}{5}$ of 30 = ☐	$\frac{5}{8}$ of 24 = ☐	$\frac{2}{3}$ of 27 = ☐	$\frac{7}{8}$ of 56 = ☐
$\frac{1}{5}$ of 45 = ☐	$\frac{3}{8}$ of 40 = ☐	$\frac{3}{4}$ of 32 = ☐	$\frac{4}{5}$ of 35 = ☐
$\frac{3}{5}$ of 45 = ☐	$\frac{7}{8}$ of 48 = ☐	$\frac{3}{4}$ of 40 = ☐	$\frac{2}{3}$ of 36 = ☐

Workout B

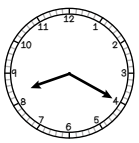
Add and Subtract Fractions Workout

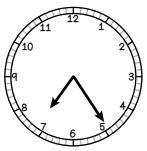
$\frac{1}{5} + \frac{1}{5} =$ ☐	$\frac{1}{4} + \frac{1}{4} =$ ☐	$\frac{2}{4} - \frac{1}{4} =$ ☐	$\frac{3}{4} - \frac{1}{4} =$ ☐
$\frac{2}{5} + \frac{2}{5} =$ ☐	$\frac{1}{8} + \frac{1}{8} =$ ☐	$\frac{2}{8} - \frac{1}{8} =$ ☐	$\frac{7}{8} - \frac{5}{8} =$ ☐
$\frac{3}{5} + \frac{1}{5} =$ ☐	$\frac{1}{6}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

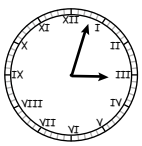
Workout C

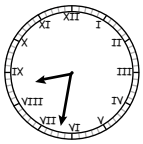
Time Workout

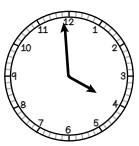
Write the time in words as minutes to or past the hour and as digital time.

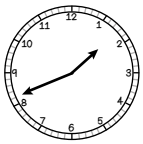












Duration Game

Workout D

You need:
Time templates (see below)
Card Set A (print off the cards on the next page)
Card Set B (print off the cards on the next page)

To play:
Shuffle Card Set A and deal two cards to each player.
Shuffle Card Set B and deal two cards to each player.

Each player makes two times on the Time Template and calculates the duration from one time to the other.

The player who calculates the longest duration wins a point.
Cards are replaced into their sets, shuffled and dealt again.

To win:
The first player to get 10 points wins the Game.

Time Template

From A B To A B

Duration Cards

Set A

5 past	10 past	quarter past	20 past	25 past
5 to	10 to	quarter to	20 to	25 to

Set B

1	2	3	4	5
6	7	8	9	10
11	12			

Missing Number Workout

Workout E

Put digits in the empty boxes so that the calculations are correct.

Complete them in several different ways.

$$\frac{\square}{\square} \text{ of } \square 4 = \square$$

$$\frac{4}{5} \text{ of } 4\square = 3\square$$

$$\frac{\square}{\square\square} \text{ of } 20 = 1\square$$

Coco thinks it is only possible to put a 2 in one of the boxes.
Do you agree?

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.

Sunrise, Sunset Investigation

Workout F

Count night time as being from sunset to sunrise for this activity.

Choose a sunset time between 4pm and 9pm. (You could use the cards from Workout D or research the sunset time online.)

Choose a sunrise time between 5am and 8am.

Calculate how many hours and minutes there are from sunset to sunrise.
How long is the night in hours and minutes?
You may want to use a number/time line to calculate the duration of the night.

Now calculate the length of the day time, if you use the same sunset and sunrise times.

Repeat this for at least five other sunset and sunrise times.

What do you notice? Is it always true? Explain your thinking.

Word Problem Workout

Workout G

Draw something to represent the problem before you solve it.

1. Coco has a bag of 45 marbles.
   She lends $\frac{2}{5}$ of them to Colin.
   How many marbles does she lend to Colin?

2. In a herd of cows, $\frac{1}{3}$ of them are black and white.
   24 cows are black and white.
   How many cows are there in the herd altogether?

3. Coco starts reading her book at quarter to six.
   She stops reading at twenty past six.
   For how long did Coco read her book?

4. Coco has 6 packets of 8 crackers.
   She eats one third of them.
   How many crackers does Coco have left?

5. Coco is making a cereal bar mix.
   $\frac{2}{5}$ of the mix is raisins. $\frac{2}{5}$ of the mix is oats. The rest of the mix is nuts.

   What fraction of the mix is nuts?

6. At a show, tickets are sold to men, women and children.
   $\frac{3}{10}$ of the tickets are bought by men. $\frac{6}{10}$ of the tickets are bought by women.

   What fraction of the tickets are bought by children?

Create your own problems finding fractions of amounts.

Workout H

Matching Workout

Match the calculation to the answer.
Fill in the missing buddies.

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

Match the calculation to the correct answer.
Fill in the missing buddies.

$\frac{2}{3}$ of 24	3
$\frac{2}{5}$ of 10	16
$\frac{3}{4}$ of 12	10
$\frac{3}{8}$ of 8	36
$\frac{3}{5}$ of 35	4
$\frac{7}{8}$ of 32	21
$\frac{4}{5}$ of 45	28

Create your own Matching Workout.