KeeP-uppI Maths Workout

Year 6 - Pack 5

KPIs for Term 3

Add and subtract fractions with denominators that are not multiples of each other
Add and subtract mixed numbers
Multiply simple pairs of proper fractions
Divide proper fractions by a whole number

Adding and Subtracting Fractions Workout

Workout A

Calculate giving your answer as mixed number where appropriate

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

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

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

$\frac{1}{2}+\frac{1}{4}+\frac{1}{5}=$ ☐ $\frac{1}{2}+\frac{1}{3}+\frac{1}{4}=$ ☐ $\frac{1}{3}-\frac{1}{5}-\frac{1}{10}=$ ☐ $\frac{1}{2}-\frac{1}{3}+\frac{1}{5}=$ ☐

Adding and Subtracting Mixed Numbers Workout

Workout B

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

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

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

☐ $=1\frac{2}{3}+1\frac{4}{9}$ ☐ $=1\frac{2}{3}+1\frac{3}{4}$ ☐ $=3\frac{1}{4}-1\frac{5}{8}$ ☐ $=4\frac{1}{3}-1\frac{2}{5}$

$2\frac{3}{4}+2\frac{5}{8}=$ ☐ $2\frac{4}{5}+1\frac{1}{3}=$ ☐ $4\frac{3}{5}-3\frac{7}{10}=$ ☐ $4\frac{3}{8}-1\frac{2}{5}=$ ☐

Multiplying and Divide Fractions Workout

Workout C

$\frac{1}{2}\times\frac{1}{4}=$ ☐ $\frac{2}{3}\times\frac{2}{5}=$ ☐ $\frac{1}{4}\div 2=$ ☐ $\frac{6}{7}\div 2=$ ☐

$\frac{1}{3}\times\frac{1}{4}=$ ☐ $\frac{2}{5}\times\frac{3}{4}=$ ☐ $\frac{1}{3}\div 2=$ ☐ $\frac{6}{9}\div 3=$ ☐

$\frac{2}{3}\times\frac{1}{5}=$ ☐ $\frac{3}{4}\times\frac{2}{3}=$ ☐ $\frac{3}{7}\div 3=$ ☐ $\frac{2}{3}\div 3=$ ☐

☐ $=\frac{3}{4}\times\frac{1}{2}$ ☐ $=\frac{4}{5}\times\frac{5}{6}$ ☐ $=\frac{3}{6}\div 3$ ☐ $=\frac{3}{4}\div 4$

Adding and Subtracting Fractions/Mixed Numbers Game

Workout D

You need: (print off the cards)
Game Template A or B
Card Set A for each player.
Card Set B or C for each player.

To play:
Each card set is shuffled and placed face down.
Each player picks TWO cards from Set B (or C) and places them on their Game Template as the denominators.
Each player picks one digit card from their Set A and places it on their Game Template either as a numerator or, in the case of Game B, a whole number.
Each player picks another digit card from their Set A and places it on their Game Template.
Once cards have been placed they can not be moved.
Both players keep picking cards to create fractions or mixed numbers.

To win:
The player who creates the largest total scores one point.
Using the same cards, the players try and create the smallest total. A second point is scored for the smallest total.
The first player to get 10 points wins the Game.

Game Template A

$$\frac{A}{B} + \frac{A}{B} =$$

Note
The Game Templates can be adapted by changing the '+' to a '–' to practise subtracting fractions and/or mixed numbers.

Game Template B

$$A\ \frac{A}{B} + A\ \frac{A}{B} =$$

Adding and Subtracting Fractions/Mixed Numbers Game

Set A

2	3	4	5
6	7	8	9

Set B

2	3	4	5
6	7	8	9

Adding and Subtracting Mixed Numbers Workout

Workout E

Put different digits in the empty boxes so that the fraction statements are correct.

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

$$\frac{2\ \square}{\square\ 0} = \square\ \frac{\square}{1\ \square} - 1\ \frac{\square}{\square}$$

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

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

Now complete both calculations together using the digits 0, 1, 2, 3, 4, 5, 6 and 7 at least once each.

Multiplying and Dividing Fractions Investigation

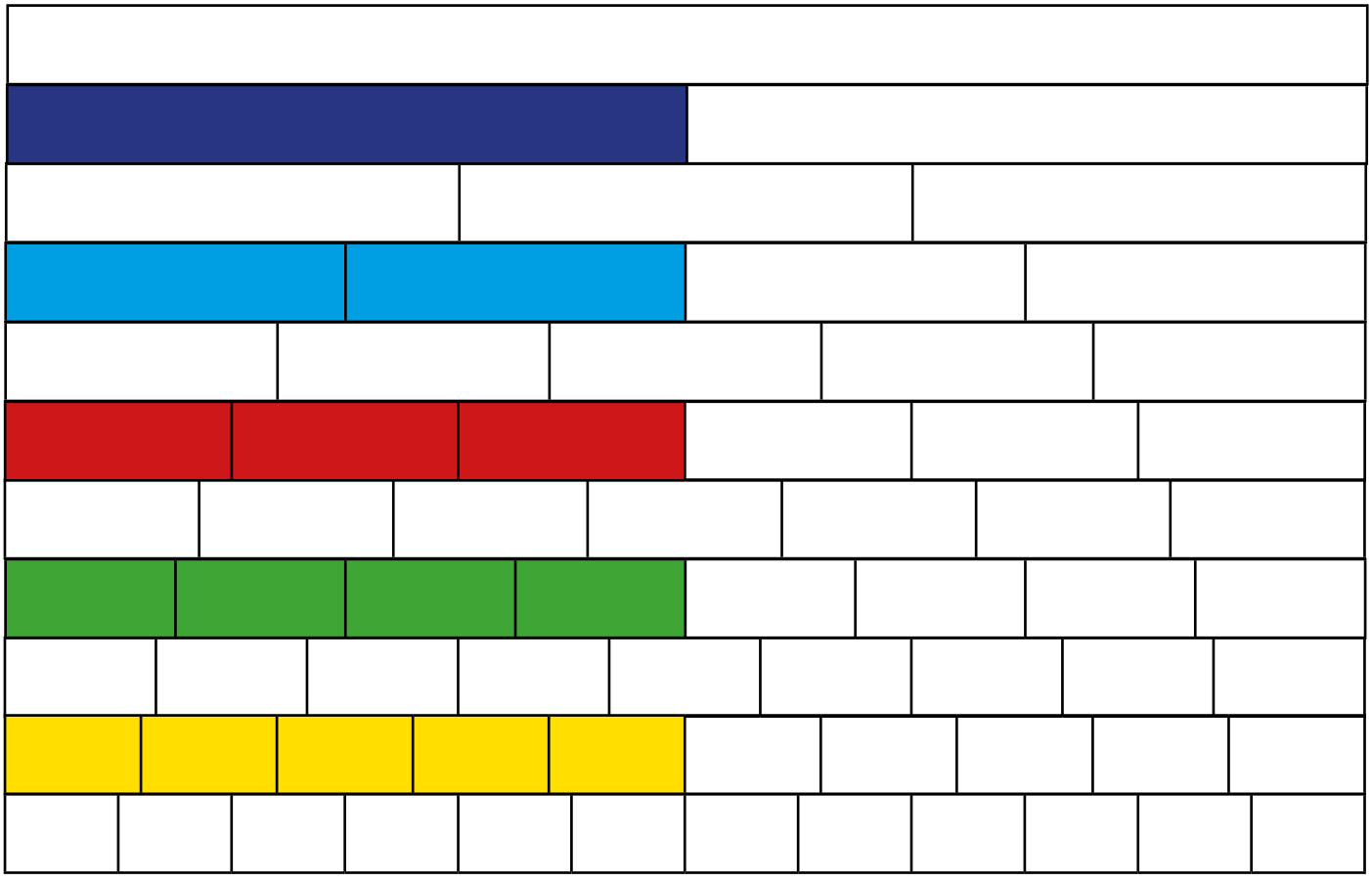
Workout F

Using the Fraction Wall, investigate multiplication and division facts involving proper fractions.

For example:

- Shade $\frac{1}{2}$

- Shade all the other equivalent fractions



Describe the shaded equivalent fractions using 'x' and '÷' such as:

$\frac{1}{2} \div 2 = \frac{1}{4}$

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

One half of one half is one quarter

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

One quarter of one half is one eigth

$\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$

Complete these statements for the other equivalent fractions.
Investigate for other unit and non-unit fractions.

Word Problem Workout

Workout G

1. $\frac{1}{3}$ of children in class five were wearing brown shoes. $\frac{2}{5}$ were wearing black shoes. Everyone else was wearing trainers.
   What fraction wore trainers?

2. Coco exercises for an hour each morning.
   She jogs for $\frac{1}{3}$ of an hour, walks for $\frac{1}{4}$ of an hour.
   What fraction of the hour has she left for flying?

3. Simon is $7\frac{3}{4}$ years old. His brother is $3\frac{5}{6}$ years younger.
   How old is his brother?

4. Fred's Bakery uses $3\frac{3}{4}$ sacks of plain flour, $4\frac{3}{5}$ sacks of self-raising flour every day. How much flour is that in total?

5. Colin shares $\frac{3}{4}$ of his lasagne between 4 of his friends.
   What fraction of the lasagne does each person get?

6. $\frac{2}{3}$ of a football team are right footed players. $\frac{1}{4}$ of right footed players wear bobble hats when they train.
   What fraction of the team are right footed bobble hat wearers?

7. $\frac{3}{5}$ of the seats in a train carriage are reserved. $\frac{1}{3}$ of these are reserved for people going shopping.
   What fraction of the seats are reserved for shoppers?

Create your own word problems involving fractions.

Matching Workout

Workout H

Match the fraction or mixed number in column A with an operation in column B to make an answer in column C

A		B		C
$\frac{4}{5}$		$-1\frac{4}{9}$		$\frac{5}{12}$
$3\frac{3}{4}$		$+2\frac{2}{5}$		$2\frac{3}{8}$
$1\frac{7}{10}$		$+\frac{2}{3}$		$1\frac{7}{15}$
$1\frac{2}{5}$		$+1\frac{4}{12}$		$3\frac{4}{5}$
$1\frac{1}{4}$		$-1\frac{3}{8}$		$4\frac{3}{10}$
$2\frac{2}{9}$		$+2\frac{3}{5}$		$\frac{7}{9}$
$2\frac{1}{12}$		$-1\frac{2}{3}$		$2\frac{7}{12}$

Match the calculation with the answer
Fill in the missing buddies

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

Match the calculation with the answer
Fill in the missing buddies

$\frac{2}{3} \times \frac{1}{3}$		$\frac{1}{10}$
$\frac{1}{4} \times \frac{3}{4}$		$\frac{1}{4}$
$\frac{4}{5} \times \frac{1}{2}$		
$\frac{1}{2} \times \frac{1}{5}$		$\frac{3}{12}$
		$\frac{3}{16}$
$\frac{1}{3} \times \frac{3}{4}$		$\frac{1}{6}$
$\frac{5}{6} \times \frac{1}{5}$		$\frac{4}{10}$

Create your own Matching Workouts.