



# Keep-uppI Maths Workout



Year 6 - Pack 5

Answers



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

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

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

$$\frac{1}{3} - \frac{1}{5} = \frac{2}{15}$$

$$\frac{2}{3} - \frac{1}{4} = \frac{5}{12}$$

$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

$$\frac{2}{5} + \frac{3}{4} = 1\frac{3}{20}$$

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

$$\frac{3}{4} - \frac{1}{5} = \frac{11}{20}$$

$$\frac{1}{4} + \frac{2}{5} = \frac{13}{20}$$

$$\frac{5}{6} + \frac{1}{4} = 1\frac{1}{12}$$

$$\frac{1}{4} - \frac{1}{6} = \frac{1}{12}$$

$$\frac{3}{4} - \frac{2}{3} = \frac{1}{12}$$

$$\frac{1}{2} + \frac{1}{4} + \frac{1}{5} = \frac{19}{20}$$

$$\frac{1}{2} + \frac{1}{3} + \frac{1}{4} = 1\frac{1}{12}$$

$$\frac{1}{3} - \frac{1}{5} - \frac{1}{10} = \frac{1}{30}$$

$$\frac{1}{2} - \frac{1}{3} + \frac{1}{5} = \frac{11}{30}$$

# Adding and Subtracting Mixed Numbers Workout

Workout B

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

$$1\frac{1}{5} + 1\frac{1}{2} = 2\frac{7}{10}$$

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

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

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

$$1\frac{1}{3} + 1\frac{1}{4} = 2\frac{7}{12}$$

$$1\frac{6}{7} - 1\frac{2}{7} = \frac{4}{7}$$

$$2\frac{1}{4} - 1\frac{1}{5} = 1\frac{1}{20}$$

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

$$1\frac{2}{5} + 2\frac{1}{4} = 3\frac{13}{20}$$

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

$$3\frac{2}{3} - 1\frac{1}{4} = 2\frac{5}{12}$$

$$\frac{31}{9} = 1\frac{2}{3} + 1\frac{4}{9}$$

$$\frac{35}{12} = 1\frac{2}{3} + 1\frac{3}{4}$$

$$\frac{15}{8} = 3\frac{1}{4} - 1\frac{5}{8}$$

$$\frac{214}{15} = 4\frac{1}{3} - 1\frac{2}{5}$$

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

$$2\frac{4}{5} + 1\frac{1}{3} = 4\frac{2}{15}$$

$$4\frac{3}{5} - 3\frac{7}{10} = \frac{9}{10}$$

$$4\frac{3}{8} - 1\frac{2}{5} = 2\frac{39}{40}$$

# Multiplying and Divide Fractions Workout

Workout C

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

$$\frac{2}{3} \times \frac{2}{5} = \frac{4}{15}$$

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

$$\frac{6}{7} \div 2 = \frac{3}{7}$$

$$\frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$$

$$\frac{2}{5} \times \frac{3}{4} = \frac{6}{20}$$

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

$$\frac{6}{9} \div 3 = \frac{2}{9}$$

$$\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$$

$$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$$

$$\frac{3}{7} \div 3 = \frac{1}{7}$$

$$\frac{2}{3} \div 3 = \frac{2}{9}$$

$$\frac{3}{8} = \frac{3}{4} \times \frac{1}{2}$$

$$\frac{20}{30} = \frac{4}{5} \times \frac{5}{6}$$

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

$$\frac{3}{16} = \frac{3}{4} \div 4$$



# 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

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

## Game Template B

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

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



# 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.

Possible  
Solution

$$1 \frac{1}{\boxed{3}} + \boxed{2} \frac{\boxed{1}}{4} = \boxed{3} \frac{\boxed{7}}{1 \boxed{2}}$$

$$\frac{2 \boxed{5}}{\boxed{3} \boxed{0}} = \boxed{2} \frac{\boxed{5}}{1 \boxed{0}} - 1 \frac{\boxed{4}}{\boxed{6}}$$

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.



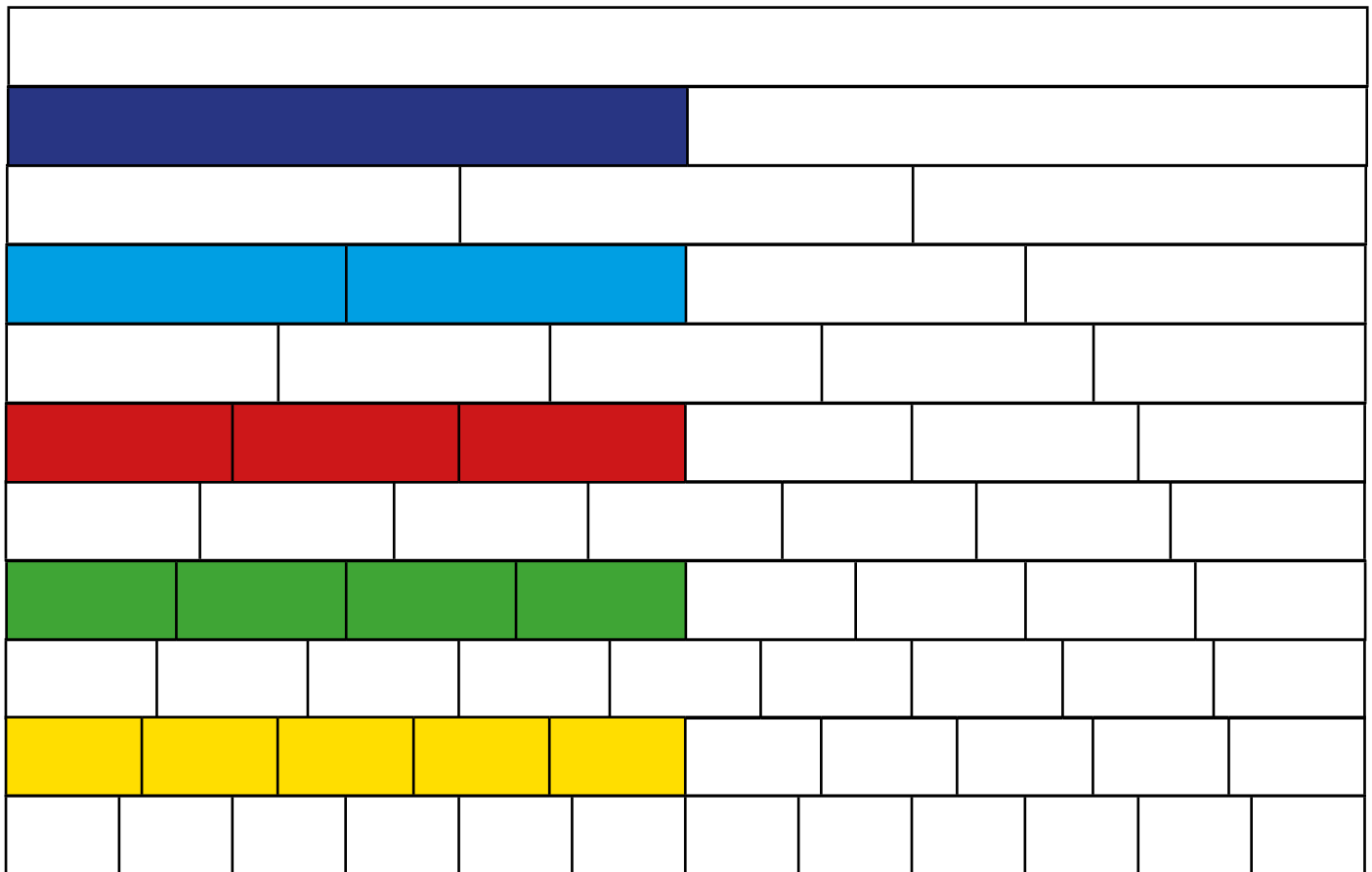
# Multiplying and Dividing Fractions Investigation

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:

One half of one half is one quarter

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

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

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

One quarter of one half is one eighth

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

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



## Word Problem Workout

Workout G

- $\frac{1}{3}$  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?  $\frac{4}{15}$
- 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?  $\frac{5}{12}$
- Simon is  $7\frac{3}{4}$  years old. His brother is  $3\frac{5}{6}$  years younger.  
How old is his brother?  $3\frac{11}{12}$
- 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?  $8\frac{7}{20}$
- Colin shares  $\frac{3}{4}$  of his lasagne between 4 of his friends.  
What fraction of the lasagne does each person get?  $\frac{3}{16}$
- $\frac{2}{3}$  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?  $\frac{2}{12}$
- $\frac{3}{5}$  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?  $\frac{3}{15}$

Create your own word problems involving fractions.



# Matching Workout

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

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

Match the calculation with the answer  
Fill in the missing buddies

$\frac{2}{3} \times \frac{1}{3}$	$\frac{1}{10}$
$\frac{1}{4} \times \frac{3}{4}$	$\frac{1}{4}$
$\frac{4}{5} \times \frac{1}{2}$	$\frac{2}{9}$
$\frac{1}{2} \times \frac{1}{5}$	$\frac{3}{12}$
$\frac{3}{4} \times \frac{1}{3}$	$\frac{3}{16}$
$\frac{1}{3} \times \frac{3}{4}$	$\frac{1}{6}$
$\frac{5}{6} \times \frac{1}{5}$	$\frac{4}{10}$

Create your own Matching Workouts.