Year 5 Maths Home Learning | Summer Term

W.C. 11th May 2020

https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1

Maths

Use the worksheets to work from and not on. All you need is a piece of paper, pencil and maybe a ruler.

After watching the videos and having a go at the practise activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

Extensions – You may wish to deepen your learning by looking at the Collins Worksheets provided by the BBC too.

Monday

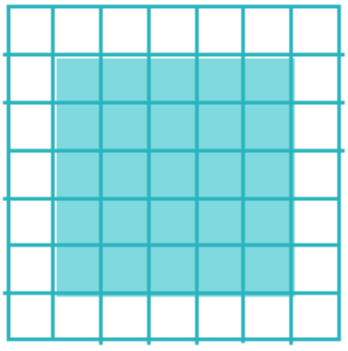
https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1

Introducing the formula for area

What is area?

Area is the term used to define the amount of space taken up by a 2D shape or surface. We **measure area in square units** : cm^2 or m^2.

Area is calculated by **multiplying the length of a shape by its width.** In this case, we could work out the area of this rectangle even if it wasn't on squared paper, just by working out 5cm x 5cm = $25cm^2$ (the shape is not drawn to scale).



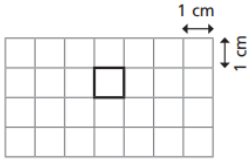
https://whiterosemaths.com/homelearning/year-5/

Mild

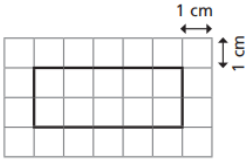
1 On the grid, the area of each square is 1 cm²

Calculate the area of each rectangle.

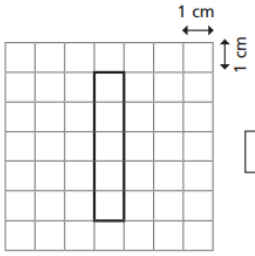
a)



c)



b)



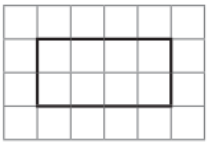
2 Complete the sentences to describe the rectangle.

There are ☐ rows.

Each row has ☐ squares.

There are ☐ squares altogether.

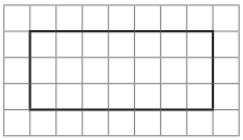
☐ × ☐ = ☐



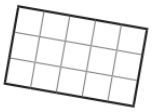
3 The area of each square is 1 cm²

Work out the area of each rectangle.

a)



c)



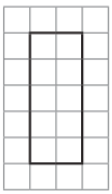
☐ × ☐ = ☐

area = ☐

☐ × ☐ = ☐

area = ☐

b)



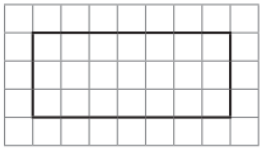
d)

Medium

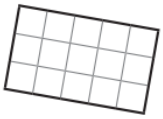
3 The area of each square is 1 cm²

Work out the area of each rectangle.

a)



c)



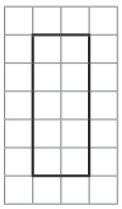
☐ × ☐ = ☐

area = ☐

☐ × ☐ = ☐

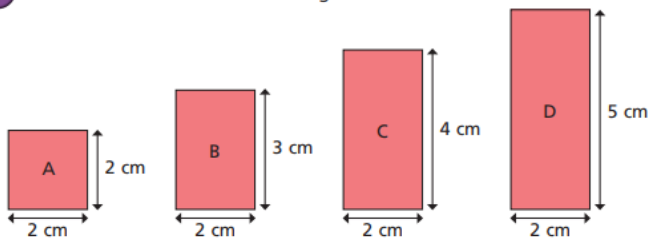
area = ☐

b)



d)

4 Calculate the area of the rectangles.



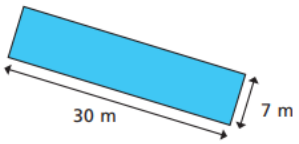
A = ☐ cm² B = ☐ cm² C = ☐ cm² D = ☐ cm²

5 Work out the area of these rectangles.

a)

☐

b)

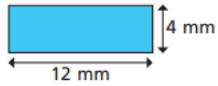


☐

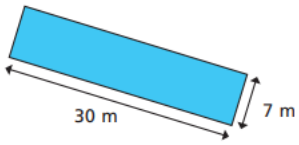
Spicy

5 Work out the area of these rectangles.

a)

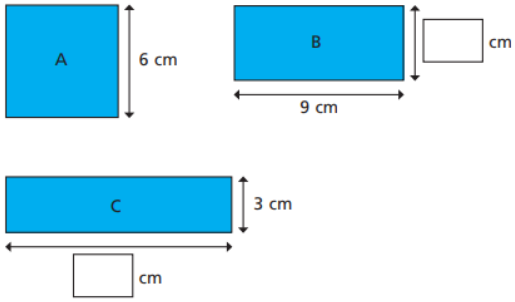


b)



6 How many rectangles can you draw that have an area of 24 cm²?
Label the lengths. Your drawings do not have to be exact.

7 These shapes all have the same area. Shape A is a square.
Work out the missing lengths.



8 A rectangle has an area of 96 cm²
The length of the rectangle is 4 cm longer than the width.
Work out the length and width of the rectangle.

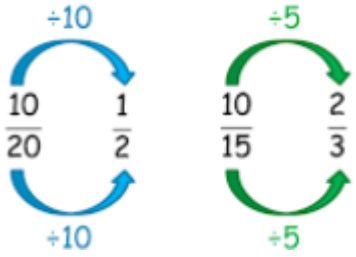
Want more? – Go to Purple Mash and do the area activites.

Tuesday

https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1

Finding equivalent fractions

https://whiterosemaths.com/homelearning/year-5/

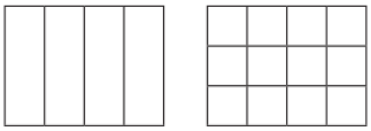


or you can multiply

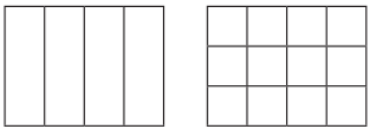
Mild

Draw these out and colour.

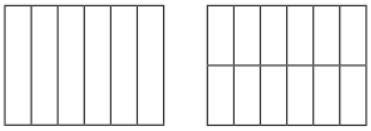
1 Shade the shapes to show the equivalent fractions.

a) 

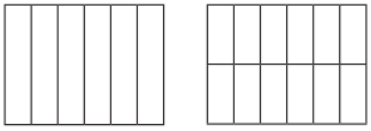
$\frac{1}{4} = \frac{\square}{12}$

b) 

$\frac{3}{4} = \frac{\square}{12}$

c) 

$\frac{1}{6} = \frac{\square}{\square}$

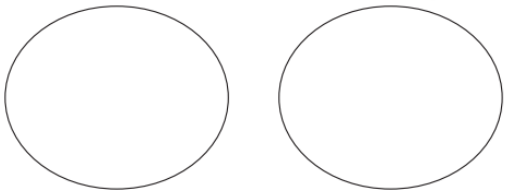
d) 

$\frac{5}{6} = \frac{\square}{\square}$

2 Draw two rectangles to show that $\frac{1}{3} = \frac{4}{12}$

3 a) Sort the fractions into the groups.

Equivalent to $\frac{1}{4}$ | Equivalent to $\frac{1}{3}$



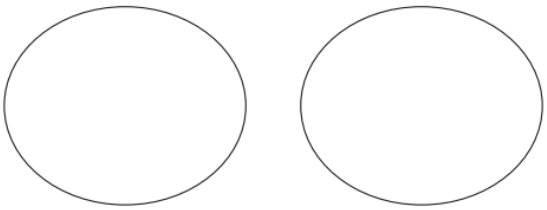
$\frac{5}{15}$ $\frac{2}{6}$ $\frac{3}{12}$ $\frac{6}{24}$ $\frac{8}{24}$ $\frac{5}{20}$ $\frac{4}{12}$ $\frac{2}{8}$

b) Write one more fraction in each group.

Medium

3 a) Sort the fractions into the groups.

Equivalent to $\frac{1}{4}$ | Equivalent to $\frac{1}{3}$



$\frac{5}{15}$ $\frac{2}{6}$ $\frac{3}{12}$ $\frac{6}{24}$ $\frac{8}{24}$ $\frac{5}{20}$ $\frac{4}{12}$ $\frac{2}{8}$

b) Write one more fraction in each group.

4 Complete the equivalent fractions.

a) $\frac{1}{7} = \frac{\square}{14}$

b) $\frac{5}{7} = \frac{\square}{14}$

c) $\frac{7}{8} = \frac{14}{\square}$

d) $\frac{3}{4} = \frac{6}{\square}$

e) $\frac{3}{4} = \frac{12}{\square}$

f) $\frac{3}{4} = \frac{\square}{12}$

g) $\frac{2}{\square} = \frac{10}{15}$

h) $\frac{2}{\square} = \frac{10}{25}$

i) $\frac{2}{7} = \frac{10}{\square}$

5 Find three ways to make the fractions equivalent.

a) $\frac{1}{\square} = \frac{7}{\square}$ $\frac{1}{\square} = \frac{7}{\square}$ $\frac{1}{\square} = \frac{7}{\square}$

b) $\frac{7}{\square} = \frac{14}{\square}$ $\frac{7}{\square} = \frac{14}{\square}$ $\frac{7}{\square} = \frac{14}{\square}$

c) $\frac{\square}{7} = \frac{\square}{14}$ $\frac{\square}{7} = \frac{\square}{14}$ $\frac{\square}{7} = \frac{\square}{14}$

Spicy

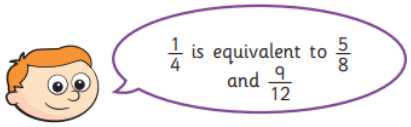
5 Find three ways to make the fractions equivalent.

a) $\frac{1}{\square} = \frac{7}{\square}$ $\frac{1}{\square} = \frac{7}{\square}$ $\frac{1}{\square} = \frac{7}{\square}$

b) $\frac{7}{\square} = \frac{14}{\square}$ $\frac{7}{\square} = \frac{14}{\square}$ $\frac{7}{\square} = \frac{14}{\square}$

c) $\frac{\square}{7} = \frac{\square}{14}$ $\frac{\square}{7} = \frac{\square}{14}$ $\frac{\square}{7} = \frac{\square}{14}$

6 Ron is finding equivalent fractions to $\frac{1}{4}$



Do you agree with Ron? _____

Draw a diagram to support your answer.

7 Here are some equivalent fractions.

Find the values of A, B and C.

$\frac{A}{9}$ $\frac{3}{B}$ $\frac{2}{18}$ $\frac{C}{90}$

A = ☐ B = ☐ C = ☐

8 Here are three fraction cards.

All the fractions are equivalent.

$\frac{3}{A}$ $\frac{B}{14}$ $\frac{12}{C}$

A + B = 13

Work out the value of C.

Want more? – Have a go at the Purple Mash 2Dos on equivalent fractions.

Wednesday

https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-and-p6-lessons/1

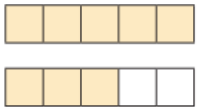
Improper fractions to mixed numbers and vice versa

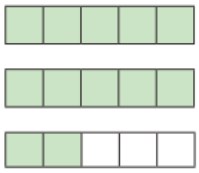
https://whiterosemaths.com/homelearning/year-5/

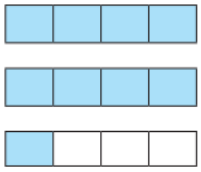
Mild

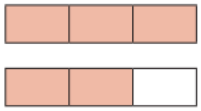
Draw out number 2

1 Convert the improper fractions to mixed numbers.

a)  $\frac{8}{5} = \square$

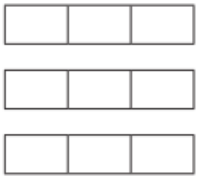
b)  $\frac{\square}{5} = \square$

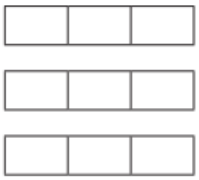
c)  $\frac{\square}{\square} = \square$

d)  $\frac{\square}{\square} = \square$

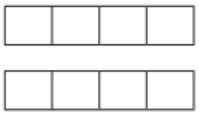
2 Shade the bar models to represent each improper fraction.

Convert the improper fractions to mixed numbers.

a)  $\frac{7}{3} = \square$

b)  $\frac{8}{3} = \square$

c)  $\frac{9}{4} = \square$

d)  $\frac{11}{4} = \square$

3 Convert the improper fractions to mixed numbers.

a) $\frac{10}{2} = \square$

b) $\frac{10}{3} = \square$

c) $\frac{10}{4} = \square$

d) $\frac{10}{5} = \square$

e) $\frac{12}{5} = \square$

f) $\frac{13}{6} = \square$

g) $\frac{13}{7} = \square$

h) $\frac{31}{8} = \square$

Medium

3 Convert the improper fractions to mixed numbers.

a) $\frac{10}{2} = \square$

b) $\frac{10}{3} = \square$

c) $\frac{10}{4} = \square$

d) $\frac{10}{5} = \square$

e) $\frac{12}{5} = \square$

f) $\frac{13}{6} = \square$

g) $\frac{13}{7} = \square$

h) $\frac{31}{8} = \square$

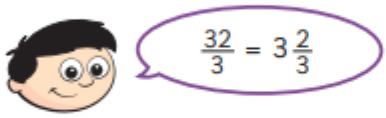
4 Eva has 7 bottles of juice.

Each bottle contains half a litre of juice.

How many litres of juice does Eva have altogether?

Write your answer as a mixed number.

5 Dexter is converting improper fractions.



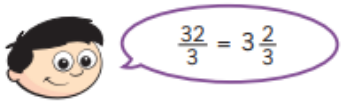
Explain why Dexter is incorrect.

Spicy

3 Convert the improper fractions to mixed numbers.

a) $\frac{10}{2} =$ ☐
b) $\frac{10}{3} =$ ☐
c) $\frac{10}{4} =$ ☐
d) $\frac{10}{5} =$ ☐
e) $\frac{12}{5} =$ ☐
f) $\frac{13}{6} =$ ☐
g) $\frac{13}{7} =$ ☐
h) $\frac{31}{8} =$ ☐

5 Dexter is converting improper fractions.



Explain why Dexter is incorrect.

6 Find the value of ●

$\frac{27}{●} = ● \frac{2}{●}$

● = ☐

7 Find two possible values for ★ and ▲

$\frac{30}{★} = ▲\frac{2}{★}$

★ = ☐ ▲ = ☐

★ = ☐ ▲ = ☐

Want more? – Go to Purple mash and complete the 2Dos on improper fractions

Thursday

Then have a go at division with remainders 2do on Purple Mash and also search Study Ladder for area and perimeter.

Friday

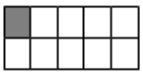
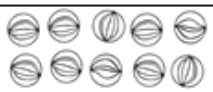
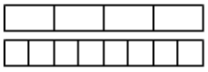
Today you may wish to challenge yourself with the online challenges or the Key Skills tasks! But make sure to have plenty of fun with maths today!

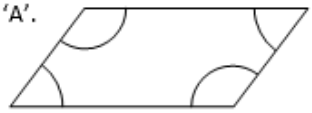
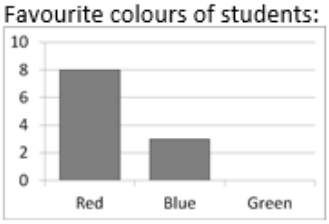
Key Skills

Remember these sheets are only to work from not on so don't worry if you cannot complete a couple of the questions, just read through them instead.

You practised these last week so now see if you can answer them without any aid. If you do still need help that is fine, just see if you can beat last weeks score.

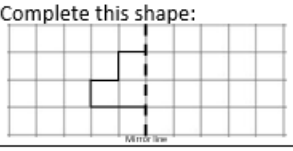
Mild

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions	
1. What is the missing number? 0 8 ☐ 24 32	3:1	11. 36 ÷ 3 =	3:10
2. What is the **2** worth in this number? 257	3:2	12. 8 x 3 =	3:10
3. Put these in order, smallest first. 293 329 932 392	3:3	13. Use 5 x 6 = 30 to solve: 300 ÷ 6 =	3:11
4. Draw an arrow to label 40. 0 ——— 100	3:4	14. Eggs come in boxes of 6. I need 20 eggs. How many boxes should I buy?	3:12
5. Circle all the **multiples** of 8. 6 8 14 16 20	3:5	15. What fraction is shaded? 	3:13
6. 462 + 100 =	3:6	16. Circle $\frac{3}{5}$ of the marbles. 	3:14
7. 256 + 128 =	3:7	17. What fraction is labelled? 0 ↑ 1	3:15
8. Write the sum to check 82 - 37 = 45. Check: 45 + ☐ = ☐	3:8	18. $\frac{1}{4} = \frac{?}{8}$ 	3:16
9. To a no. I add 27 then subtract 19. I now have 13. What did I start with?	3:9	19. Subtract the fractions. $\frac{7}{8} - \frac{3}{8}$	3:17
10. What is the missing number? 149 + ☐ = 211	3:9	20. Write the largest fraction. $\frac{2}{5}$ $\frac{1}{5}$ $\frac{4}{5}$ $\frac{3}{5}$	3:18

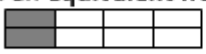
C: Measure, Geometry and Statistics	
23. About how long does it take for a full kettle to boil? **a.** 50 seconds **b.** 5 minutes **c.** 50 minutes 	3:23
22. Which of these is a correct description of a cuboid? **a.** I have 6 faces and 6 vertices. **b.** I have 6 edges and 8 vertices. **c.** I have 6 faces and 12 edges.	3:25
23. Label two acute angles using the letter 'A'. 	3:26
24. Favourite colours of students:  6 people said green. Show this.	3:29
25. How many more people said 'Red' than said 'Blue'?	3:30

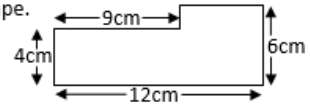
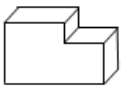
Medium

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions	
1. What is the missing number? 1,000 2,000 ☐ 4,000 5,000	*4:1*	11. 9 x 9 =	*4:9*
2. What is the missing number? 200 225 250 275 ☐	*4:1*	12. Complete the sum that is equal to 4 x 5 x 18: 20 x ☐	*4:10*
3. Round this number to the nearest 1,000: 3,192	*4:2*	13. 932 x 4 =	*4:11*
4. What is 1,000 **more** than 6,394?	*4:2*	14. To work out 4 x 55 you could do: 50 x ☐ + ☐ x 5	*4:12*
5. If the temperature starts at 5°C, then drops by 9°C, what is it now?	*4:3*	15. $\frac{35}{40} = \frac{7}{?}$	*4:13*
6. What is the value of the **8** in this number? 6,283	*4:4*	16. What is the missing number? 9.96 9.97 9.98 9.99 ☐	*4:14*
7. Write the number 74 in Roman numerals.	*4:5*	17. $\frac{2}{5} + \frac{4}{5}$	*4:15*
8. 4,115 - 1,472 =	*4:6*	18. Write 0.8 as a fraction.	*4:16*
9. **Estimate** the answer to: 15,507 + 4,489	*4:7*	19. 293 ÷ 10 =	*4:17*
10. From 300 tickets, pupils buy 89 & parents buy 184. How many are left?	*4:8*	20. Using £20 Rob buys a DVD for £6 and a CD for £6.95. How much left?	*4:18*
Total (A)		Total (B)	

C: Measure, Geometry and Statistics	
21. How many millilitres are there in 2.15 litres?	*4:19*
22. Tick (✓) the shape that has **exactly** 2 lines of symmetry. 	*4:25*
23. Complete this shape:  	*4:26*
24. Number of tyres sold by a garage one weekend: Key: ⊕ = 4 tyres Saturday ⊕ ⊕ ⊕ ⊕ (Sunday 13 were sold on Sunday. Show this. 25. How many tyres were sold in total over the weekend?	*4:29* *4:30*
Total (C)	

Spicy

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions	
1. What is the value of the **4** in this number? 1,348,567	5:1	11. Which is a **common factor** of 12 and 20? 3 4 5 6 10	5:8
2. Write **eight hundred thousand, three hundred and seven** in digits.	5:1	12. Give two **prime numbers** between 1 and 10.	5:9
3. Round 247,599 to the **nearest thousand.**	5:2	13. 628 x 12	5:10
4. What is the missing number? 837 937 ☐ 1,137	5:2	14. 1,278 ÷ 100	5:11
5. What temperature is 15 degrees less than 6 degrees Celsius?	5:3	15. What is 7^2 ?	5:12
6. What number is represented by these Roman Numerals? **DXXX**	5:4	16. $\frac{3}{4} + \frac{1}{8} =$	5:13
7. 12,498 – 3,149 =	5:5	17. Find an **equivalent fraction** of $\frac{1}{4}$. 	5:14
8. 24,829 + 83,592 =	5:5	18. Write $\frac{17}{6}$ as a **mixed number.**	5:15
9. Complete this sum without written working. 15,200 – 4,150 =	5:6	19. $\frac{2}{7}$ x 21 =	5:16
10. I buy 2 CDs costing £8.45 each. How much change do I get from £20?	5:7	20. Round 2.37 to 1 decimal place.	5:17
Total (A)		Total (B)	

C: Measure and Problem Solving	
21. Megan and Joe are sharing a pizza. Megan eats 25% of the pizza. Joe eats $\frac{1}{2}$ of the pizza.  What **fraction** of the pizza is left?	5:19
22. How many **centimetres** are there in **3.7 metres**?	5:20
23. Calculate the **perimeter** of this shape. 	5:21
24. Estimate the volume of this shape. Write a, b or c. a. 6 cm³. b. 26 cm³. c. 46 cm³.  	5:22
25. Sarah gets on a train at **2.30pm**. The train journey lasts **110 minutes**. What time does Sarah arrive at her destination?	5:23
Total (C)	