Maths - Planning and Ideas Week Commencing: 18th May 2020

Year Groups: 5

Starter Times Table Rockstars Link - https://ttrockstars.com/

White Rose Maths Link https://whiterosemaths.com/homelearning/year-5/ All of the videos are included in Summer Term Week 4 wc11th May
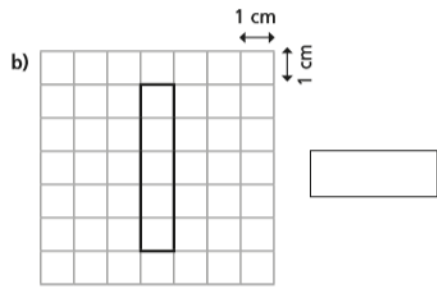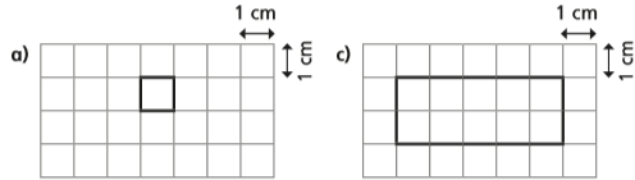
This week's planning will be recapping previous learning from earlier this year. The idea behind this is to consolidate children's understanding of key concepts in order to help prepare them for next year. We are aware that some children may already have a sound understanding of some of these areas of learning, while others will still need to practise them. I have tried to include examples of Fluency and Reasoning and Problem Solving activities similar to what we complete in class. For any children who are very confident in working through the worksheets, I have added some Dive Deeper activities in the blue boxes for each day to deepen children's understanding.

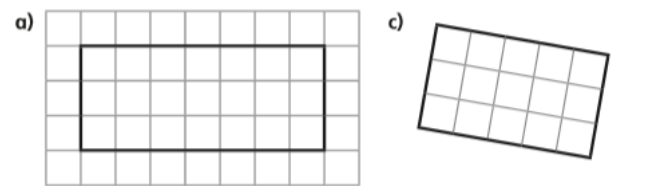|	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	**Can you find the area of rectangles?**	**Can you find equivalent fractions?**	**Can you convert between mixed number and improper fractions?**	**Can you compare and order fractions less than one?**	**Arithmetic Activity**
Activity	**Starter: Times Table Rockstars** **Main Teaching:** Watch the video (Lesson 1 – Area of Rectangles). Remember, to work out the area of a rectangle you have to *multiply* the length of the sides. **Activity:** Fluency – multiply the sides to find the areas of the rectangles Problem Solving – work out the missing lengths Dive Deeper – how many rectangles can you draw which fit the criteria?	**Starter: Times Table Rockstars** **Main Teaching:** Watch the video (Lesson 2 – Equivalent Fractions) to recap on what you have learned about equivalent fractions. **Activity:** Fluency – use the pictures to work out the equivalent fractions Reasoning – write whether or not you agree with Ron's theory Dive Deeper – Find the missing value (tricky!)	**Starter: Times Table Rockstars** **Main Teaching:** Watch the video (Lesson 3 – Converting improper fractions to mixed numbers and vice versa). Watch how the teacher on the video uses the pictures to help convert. **Activity:** Fluency – shade the diagrams to convert between the fractions Reasoning – write whether or not you agree with Whitney Dive Deeper – find two possible values for the symbols in the fractions. You might need scrap paper to work this out.	**Starter: Times Table Rockstars** **Main Teaching:** Watch the video (Lesson 4 – Compare and order fractions less than one) and follow along with the teacher's activities on the video.. **Activity:** Fluency – write a greater or less than sign in the box to compare the fractions. Remember what we did in class – convert the denominators to the largest denominator. Reasoning – Write a possible value in the box. Remember when marking these, there might be multiple answers. Dive Deeper - - write four different possibilities of answers for the missing numerator.	**Starter: Times Table Rockstars** Something a bit different today! Use a scrap piece of paper to work out the answers to the arithmetic problems. The answers are included for when you have finished

Monday – Fluency –

Remember – to work out the area you must *multiply* the sides. Each square in this section is 1cm.
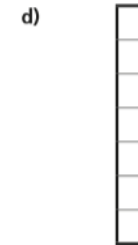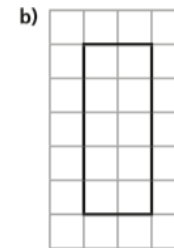
Calculate the area of each rectangle.

a)

1 cm

1 cm

c)

1 cm

1 cm

b)

1 cm

1 cm

A = ____ cm²   B = ____ cm²   C = ____ cm²   D = ____ cm²

A   2 cm
2 cm

B   3 cm
2 cm

C   4 cm
2 cm

D   5 cm
2 cm

Work out the area of each rectangle.

a)

c)

____ × ____ = ____

area = ____

____ × ____ = ____

area = ____

b)

d)

____ × ____ = ____

area = ____

____ × ____ = ____
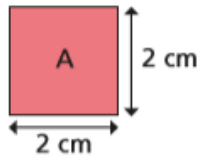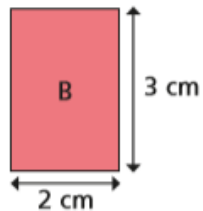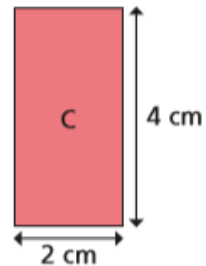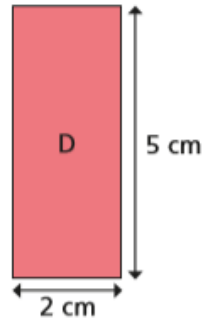
area = ____

Monday –Problem Solving

These shapes all have the same area. Shape A is a square.

Work out the missing lengths.

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.

A   6 cm

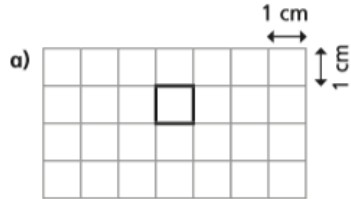B   ___ cm

9 cm

C   3 cm

___ cm

length = ___   width = ___

Dive Deeper

In this space, how many rectangles

can you draw that have an area of 24cm2?

Label your drawings but they do not have to be exact.

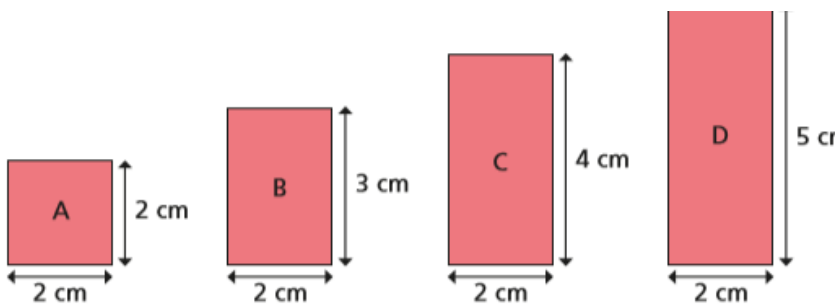**Monday – Fluency Answers**

Calculate the area of each rectangle.

a)

1 cm ↔
1 cm ↕
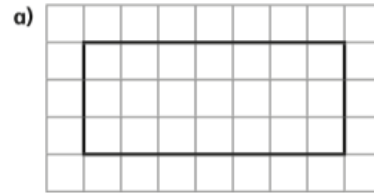
c)

1 cm ↔
1 cm ↕

| 1 cm² |

| 10 cm² |

b)

1 cm ↔
1 cm ↕

| 5 cm² |

A — 2 cm, 2 cm

B — 3 cm, 2 cm

C — 4 cm, 2 cm

D — 5 cm, 2 cm
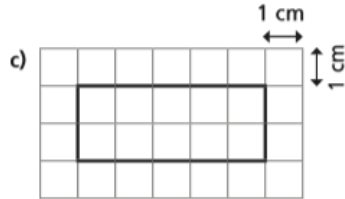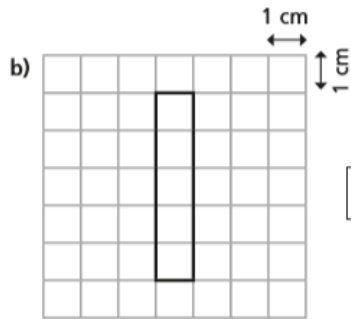
A = | 4 | cm²   B = | 6 | cm²   C = | 8 | cm²   D = | 10 | cm²

a)

| 3 | × | 7 | = | 21 |

area = | 21 cm² |

c)

| 3 | × | 5 | = | 15 |

area = | 15 cm² |

b)

| 5 | × | 2 | = | 10 |

area = | 10 cm² |

d)
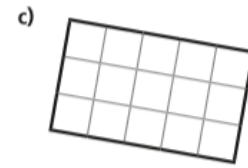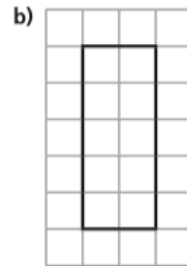
| 7 | × | 1 | = | 7 |

area = | 7 cm² |

Monday –Problem Solving Answers
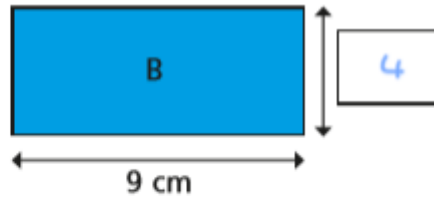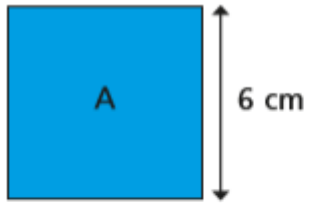
A
6 cm

B
4

9 cm

C
3 cm

12 cm

A rectangle has an area of 96 cm²

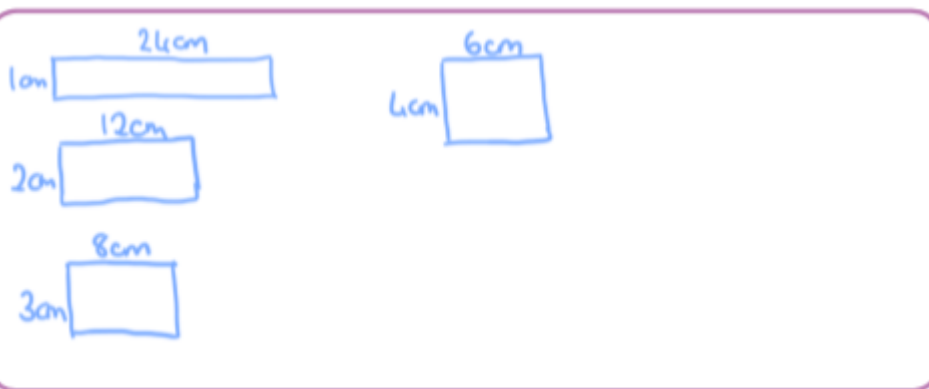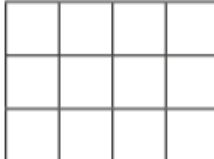The length of the rectangle is 4 cm longer than the width.

Work out the length and width of the rectangle.
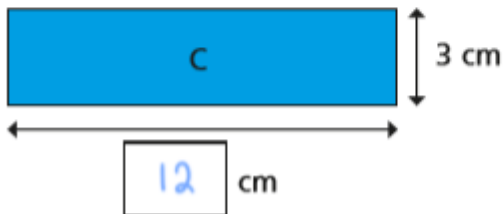
length = 12cm   width = 8 cm
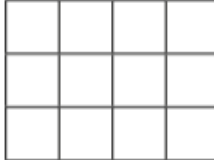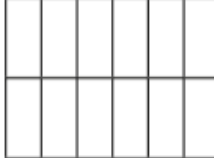
Dive Deeper Possible Answers

24cm
1cm

6cm
4cm

12cm
2cm

8cm
3cm

Tuesday – Fluency

a)

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

b)

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

c)

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

d)

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

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

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

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

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

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

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

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

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

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

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

$\frac{1}{4}$ is equivalent to $\frac{5}{8}$ and $\frac{9}{12}$

Do you agree with Ron? _____

Draw a diagram to support your answer.

Dive Deeper

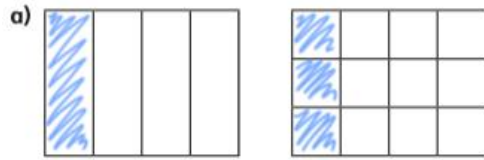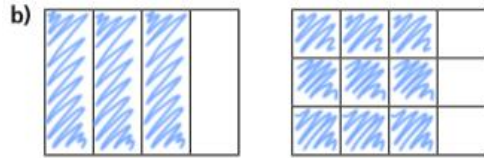$$\frac{1}{5} = \frac{3}{1 + \bullet}$$
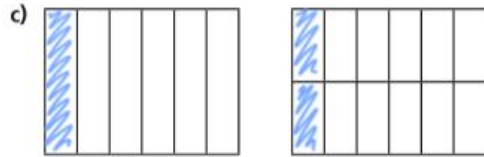
Find the value of ⬤

Tuesday – Fluency Answers

a)

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

b)

$\frac{3}{4} = \frac{9}{12}$

c)

$\frac{1}{6} = \frac{2}{12}$

d)
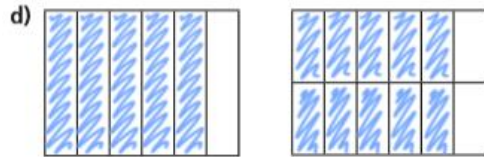
$\frac{5}{6} = \frac{10}{12}$

a) $\frac{1}{7} = \frac{2}{14}$

b) $\frac{5}{7} = \frac{10}{14}$

c) $\frac{7}{8} = \frac{14}{16}$

d) $\frac{3}{4} = \frac{6}{8}$

e) $\frac{3}{4} = \frac{12}{16}$

f) $\frac{3}{4} = \frac{9}{12}$
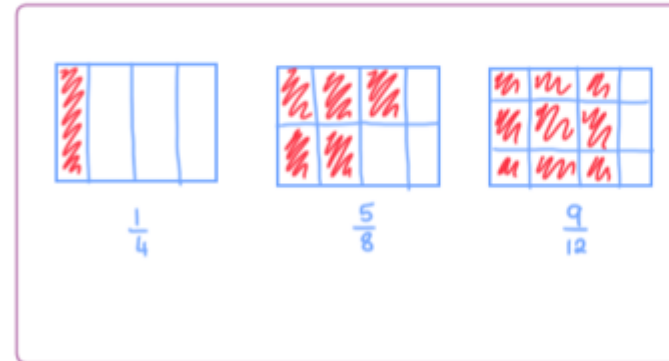
g) $\frac{2}{3} = \frac{10}{15}$

h) $\frac{2}{5} = \frac{10}{25}$

i) $\frac{2}{7} = \frac{10}{35}$

Tuesday – Reasoning Answers

Do you agree with Ron? __No__

Draw a diagram to support your answer.

$\frac{1}{4}$ $\frac{5}{8}$ $\frac{9}{12}$

● $= \boxed{14}$

Wednesday

Shade the bar models to represent each improper fraction.
Convert the improper fractions to mixed numbers.

a)

$$\frac{7}{3} = \boxed{}$$

b)

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

c)

$$\frac{9}{4} = \boxed{}$$

d)

$$\frac{11}{4} = \boxed{}$$

Convert the mixed numbers to improper fractions.
Colour the bar models to help you.

a)

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

b)

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

c)

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

d)

$$3\frac{2}{5} = \boxed{}$$

Here are 4 whole pizzas and $\frac{3}{5}$ of a pizza.

How many children can have $\frac{1}{5}$ of a pizza? $\boxed{}$

Whitney is converting mixed numbers to improper fractions.

$$4\frac{1}{7} = \frac{28}{7}$$

Do you agree with Whitney? _____
Explain your answer.

_____

_____

Find two possible values for ★ and ▲

$$\frac{30}{★} = ▲\frac{2}{★}$$

★ = $\boxed{}$ ▲ = $\boxed{}$

★ = $\boxed{}$ ▲ = $\boxed{}$
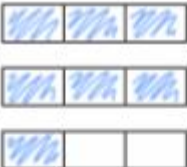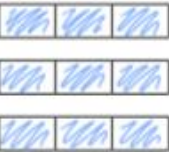
Wednesday Answers

a)

$\frac{7}{3} = 2\frac{1}{3}$

b)

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

c)

$\frac{9}{4} = 2\frac{1}{4}$

d)

$\frac{11}{4} = 2\frac{3}{4}$

a)

$2\frac{1}{4} = \frac{9}{4}$

b)

$2\frac{1}{3} = \frac{7}{3}$

c)

$3\frac{1}{3} = \frac{10}{3}$

d)

$3\frac{2}{5} = \frac{17}{5}$

Here are 4 whole pizzas and $\frac{3}{5}$ of a pizza.

How many children can have $\frac{1}{5}$ of a pizza?   23

$4\frac{1}{7} = \frac{28}{7}$

Do you agree with Whitney? No

Explain your answer.

She has converted 4 wholes to $\frac{28}{7}$ but forgotten to add the extra seventh.

★ = 14   ▲ = 2

★ = 7   ▲ = 4

Thursday

a) $\frac{1}{5}$ ◯ $\frac{4}{15}$ g) $\frac{2}{9}$ ◯ $\frac{1}{3}$

b) $\frac{2}{5}$ ◯ $\frac{4}{15}$ h) $\frac{4}{9}$ ◯ $\frac{1}{3}$

c) $\frac{2}{5}$ ◯ $\frac{6}{15}$ i) $\frac{4}{12}$ ◯ $\frac{1}{3}$

d) $\frac{2}{3}$ ◯ $\frac{6}{15}$ j) $\frac{8}{12}$ ◯ $\frac{2}{3}$

e) $\frac{2}{3}$ ◯ $\frac{6}{12}$ k) $\frac{8}{12}$ ◯ $\frac{3}{3}$

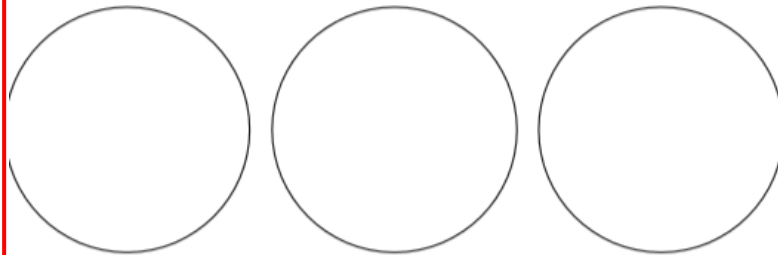f) $\frac{2}{3}$ ◯ $\frac{6}{9}$ l) $\frac{8}{12}$ ◯ $\frac{3}{4}$

Sort the fractions into the circles.

greater than $\frac{1}{3}$ equal to $\frac{1}{3}$ less than $\frac{1}{3}$

◯ ◯ ◯

$\frac{2}{3}$ $\frac{1}{6}$ $\frac{1}{2}$ $\frac{2}{6}$ $\frac{2}{9}$ $\frac{5}{12}$ $\frac{4}{12}$ $\frac{4}{15}$ $\frac{5}{15}$

What could the missing numerators and denominators be?

Write a number in each box to make the statements correct.

a) $\frac{\Box}{5} < \frac{5}{15}$ d) $\frac{\Box}{3} < \frac{5}{6}$ g) $\frac{6}{9} < \frac{5}{\Box}$

b) $\frac{\Box}{6} < \frac{5}{12}$ e) $\frac{3}{5} < \frac{5}{\Box}$ h) $\frac{10}{12} < \frac{5}{\Box}$

c) $\frac{\Box}{12} < \frac{5}{6}$ f) $\frac{5}{6} < \frac{5}{\Box}$ i) $\frac{23}{24} < \frac{5}{\Box}$

What could the missing numerator be?

$\frac{3}{5} < \frac{\Box}{15} < \frac{9}{10}$

Write all four possibilities.

$\frac{\Box}{15}$ $\frac{\Box}{15}$ $\frac{\Box}{15}$ $\frac{\Box}{15}$

Thursday Answers

a) $\frac{1}{5}$ $<$ $\frac{4}{15}$

b) $\frac{2}{5}$ $>$ $\frac{4}{15}$

c) $\frac{2}{5}$ $=$ $\frac{6}{15}$

d) $\frac{2}{3}$ $>$ $\frac{6}{15}$

e) $\frac{2}{3}$ $>$ $\frac{6}{12}$

f) $\frac{2}{3}$ $=$ $\frac{6}{9}$

g) $\frac{2}{9}$ $<$ $\frac{1}{3}$

h) $\frac{4}{9}$ $>$ $\frac{1}{3}$

i) $\frac{4}{12}$ $=$ $\frac{1}{3}$

j) $\frac{8}{12}$ $=$ $\frac{2}{3}$

k) $\frac{8}{12}$ $<$ $\frac{3}{3}$

l) $\frac{8}{12}$ $<$ $\frac{3}{4}$

greater than $\frac{1}{3}$: $\frac{2}{3}$ $\frac{1}{2}$ $\frac{5}{12}$

equal to $\frac{1}{3}$: $\frac{2}{6}$ $\frac{4}{12}$ $\frac{5}{15}$

less than $\frac{1}{3}$: $\frac{1}{6}$ $\frac{2}{9}$ $\frac{4}{15}$

$\boxed{\frac{2}{3}}$ $\boxed{\frac{1}{6}}$ $\boxed{\frac{1}{2}}$ $\boxed{\frac{2}{6}}$ $\boxed{\frac{2}{9}}$ $\boxed{\frac{5}{12}}$ $\boxed{\frac{4}{12}}$ $\boxed{\frac{4}{15}}$ $\boxed{\frac{5}{15}}$

Write a number in each box to make the statements correct.

e.g.

a) $\dfrac{\boxed{1}}{5} < \dfrac{5}{15}$

b) $\dfrac{\boxed{2}}{6} < \dfrac{5}{12}$

c) $\dfrac{\boxed{5}}{12} < \dfrac{5}{6}$

d) $\dfrac{\boxed{1}}{3} < \dfrac{5}{6}$

e) $\dfrac{3}{5} < \dfrac{5}{\boxed{5}}$

f) $\dfrac{5}{6} < \dfrac{5}{\boxed{5}}$

g) $\dfrac{6}{9} < \dfrac{5}{\boxed{6}}$

h) $\dfrac{10}{12} < \dfrac{5}{\boxed{4}}$

i) $\dfrac{23}{24} < \dfrac{5}{\boxed{5}}$

What could the missing numerator be?

$$\frac{3}{5} < \frac{\boxed{}}{15} < \frac{9}{10}$$

Write all four possibilities.

$\dfrac{\boxed{10}}{15}$ $\qquad$ $\dfrac{\boxed{11}}{15}$ $\qquad$ $\dfrac{\boxed{12}}{15}$ $\qquad$ $\dfrac{\boxed{13}}{15}$

1) Work out 0.7 + 0.8

2) Write the Roman numerals XXXVII in figures.

3) Which of these fractions is equivalent to a half?

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

4) 42 ÷ 6

5) Write down the number eighteen thousand and twenty-seven

6) Fill in the missing number 4081 = 4001 + ___

7) Write down two numbers with a sum of 9 and a difference of 1.

8) How many vertices in a triangular pyramid?

9) Write all down the factors of 15.

____ ____ ____ ____

10) Add together 6½, 5 and 3½

11) I have £10. I spend £2.70. How much do I have left?

12) What is the value of $x + 7$ when $x = 3$?

13) What is ⅓ of 21?

14) A plane journey takes 6 ½ hours. If I set off at 8:40am, what time will I arrive?

15) A pen costs £4.60. How much will 2 pens cost?

16) A piece of rope measuring 4m is cut into 8 equal lengths. How long will each piece be?

Friday Answers

1)	Work out 0.7 + 0.8	**1.5**
2)	Write the Roman numerals XXXVII in figures.	**37**
3)	Which of these fractions is equivalent to a half? ⅓ ⅖ ¾ ⁴⁄₉ ⅝	**¾**
4)	42 ÷ 6	**7**
5)	Write down the number eighteen thousand and twenty-seven	**18,027**
6)	Fill in the missing number 4081 = 4001 + ___	**80**
7)	Write down two numbers with a sum of 9 and a difference of 1.	**4 and 5**
8)	How many vertices in a triangular pyramid? 	**4**
9)	Write all down the factors of 15. ____ ____ ____ ____	**1, 3, 5, and 15**
10)	Add together 6½, 5 and 3½	**15**
11)	I have £10. I spend £2.70. How much do I have left?	**£7.30**
12)	What is the value of $x + 7$ when $x = 3$?	**10**
13)	What is ⅓ of 21?	**7**
14)	A plane journey takes 6 ½ hours. If I set off at 8:40am, what time will I arrive?	**3:10pm**
15)	A pen costs £4.60. How much will 2 pens cost?	**£9.20**
16)	A piece of rope measuring 4m is cut into 8 equal lengths. How long will each piece be?	**50cm**