Using 5ths.   *Stg 5/E6* props & rats Name: _____

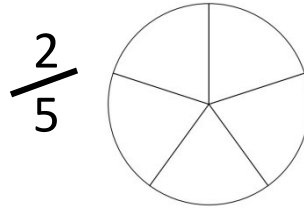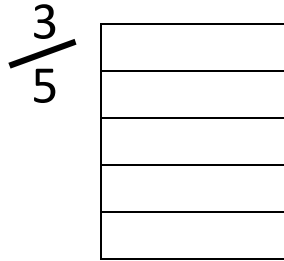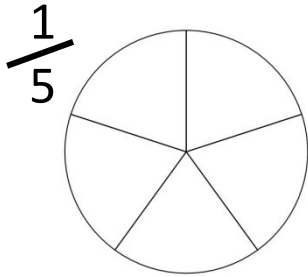Coming to grips with fifths is a great idea, they're quite handy and look good on the mantlepiece. They are reasonably easy to deal with too, because it's a similar skill to dividing by 5
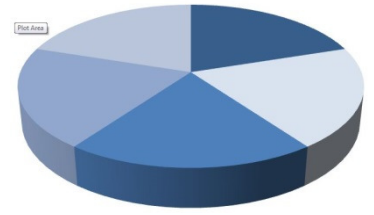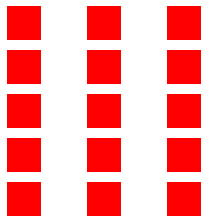
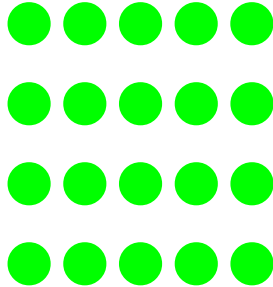Colour in these fractions: (Neatly please, not just a scribble. Or I'll bite you)

$\frac{1}{5}$ $\frac{3}{5}$ $\frac{2}{5}$ $\frac{4}{5}$

$\frac{5}{5}$
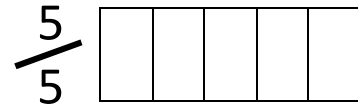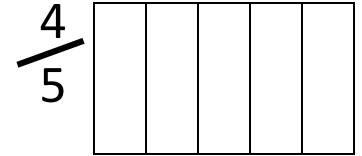
Now, let's try chopping up some sets. We know how this goes!
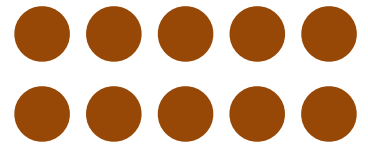Circle the fraction of each set as indicated:

1/5 of 10 =

1/5 of 15 =

3/5 of 20 = __

2/5 of 15 = __

1/5 of 20 = __

OK, this time without pictures: (Use the force Luke! Or, you can try counters if you get stuck) Remember, once you've worked out 1 fifth, just multiply that number by the numerator – the top number. For example: **1/5 of 55 = 11**, so **2/5 of 55** must be **22** because 2 x 11 = 22, and so **4/5 of 55 = 44** because 4 x 11 = 44.
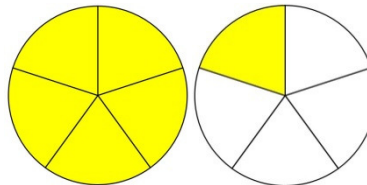
1. 1/5 of 10 = ___

2. 2/5 of 10 = ___

3. 3/5 of 10 = ___

4. 1/5 of 25 = ___

5. 3/5 of 25 = ___

6. 4/5 of 25 = ___

7. 1/5 of 50 = ___

8. 2/5 of 50 = ___

9. 3/5 of 50 = ___

10. 1/5 of 30 = ___

11. 3/5 of 30 = ___

12. 4/5 of 30 = ___

13. 1/5 of 35 = ___

14. 2/5 of 35 = ___

15. 3/5 of 35 = ___

16. 1/5 of 40 = ___

17. 3/5 of 40 = ___

18. 4/5 of 40 = ___

19. 1/5 of 60 = ___

20. 2/5 of 60 = ___

21. 4/5 of 60 = ___

'One fifth' in Te Reo Māori is *Kotahi haurima.* 'Two fifths' is *rua haurima,*
3/5 = toru haurima, 4/5 = whā haurima

Proper and improper fractions: Sometimes we deal with fractions that show more than 1 full set or whole. There are 2 ways to show these numbers. Take **six** fifths for example:

1. A proper fraction shows the whole, plus whatever is left over: $1\frac{1}{5} = \frac{6}{5}$

2. An improper fraction shows all of the parts in the numerator.

So all we need to know when we need to find out how many fifths are in a number, is how many fifths fit into 1 whole. *(5 of them, duh)* So let's try a few, after this sponsors message:

E.g **8** fifths fit into **1 ⅗** because 5 (1 x 5) + 3 = 8

1. ___ fifths fit into $2\frac{1}{5}$ ___ (2 x 5) + 1 = ___
2. ___ fifths fit into $1\frac{3}{5}$ ___ (1 x 5) + 3 = ___
3. ___ fifths fit into $3\frac{4}{5}$ ___ (3 x 5) + 4 = ___
4. ___ fifths fit into $5\frac{2}{5}$ ___ (5 x 5) + 2 = ___
5. ___ fifths fit into $7\frac{1}{5}$ ___ (7 x 5) + 1 = ___

Then, convert these improper fractions into proper, decent law abiding fractions:

6. 7/5 = _____ (just divide by 5!)

7. 10/5 = _____

8. 12/5 = _____

9. 9/5 = _____

10. 23/5 = _____

I bet you're wondering now, *how do I turn fifths into decimals*? Actually it's pretty easy. **1 ÷ 5 = 0.2**, so every **⅕ = 0.2** – then **⅖ = 0.4** and **⅗ = 0.6** and **⅘ = 0.8** – So, we can Multiply by these decimals in the same way we use fractions. E.g **0.2 x 10 = 2** (because 1/5 of 10 = 2) '**x**' = '**of**' with fractions.

a. 0.2 x 15 = **3**

b. 15 x 0.4 = ____

c. 0.6 x 15 = ____

d. 25 x 0.2 = ____

e. 0.6 x 25 = ____

f. 25 x 0.8 = ____

g. 0.2 x 30 = ____

h. 30 x 0.4 = ____

i. 0.6 x 30 = ____

Similarly, we can divide strange numbers by 5 to get a decimal answer:

j. 6 ÷ 5 = **1.2**

k. 12 ÷ 5 = ____

l. 7 ÷ 5 = ____

m. 9 ÷ 5 = ____

n. 11 ÷ 5 = ____

o. 17 ÷ 5 = **3.___**

p. 21 ÷ 5 = ____

q. 14 ÷ 5 = ____

r. 24 ÷ 5 = ____

Here's a thing: 5ths and 10ths are kind of related! There are **2** tenths in every 5th. So we can easily simplify tenths into fifths! (supposing they're even numerators) Try some here:

1. 8/ 10 = 4/5 (Just halve both numbers)   2. 2/10 = __ / ___

3. 6/10 = __ / __   4. 10 / 10 = __ / __   5. 12 / 10 = __ / __

Cinco de Mayo—or the **fifth** of May—commemorates the Mexican army's 1862 victory over France at the Battle of Puebla during the Franco-Mexican War (1861-1867). http://www.history.com/topics/holidays/cinco-de-mayo

Dave Moran 2015

Using fifths. *Stg E7/7   props & rats*   Name: _____

How to find a fifth of any number. Finding a fifth is the same as dividing by 5, much like the other types of division you know already – we can use standard form fast long division. So, let's have a go at finding a fifth of these interesting numbers. Remember to keep your place value, look out for decimals!

a. $5\overline{)7\,8.4\,5}$ b. $5\overline{)1\,0.3\,0}$ c. $5\overline{)4\,5\,6.5}$ d. $5\overline{)2.9\,1\,5}$

e. $5\overline{)5\,2\,2\,8\,0}$ f. $5\overline{)3\,9\,6\,6\,5}$ g. $5\overline{)4\,8\,2\,5\,7\,0\,0}$

h. $5\overline{)3\,1.6\,5}$ i. $5\overline{)1\,5.\,1\,5}$ j. $5\overline{)6\,5.3\,0}$ k. $5\overline{)1.0\,0\,5}$

All well and good, I hear you say, *but what if I need 2 fifths of any number? Or 4 fifths? Hmm, What then clever clogs?* Well, here is the good news: to find **2 fifths**, all you have to do is **double** the answer to **1 fifth**! E.g:

$$4\,6\,9 \longrightarrow \overset{1\quad 1}{4\,6\,9}$$
$$5\overline{)2\,3\,\overset{3}{4}\,\overset{4}{5}} \qquad \times \quad 2$$
$$= 9\,3\,8$$

One fifth of 2345 is 469, 469 x 2 = 938 – to find **3 fifths** simply **multiply by 3**, or 4 fifths - **multiply by 4**. Yep that's right!

> ⅕ of any number is 20%.
> ⅖ of any number is 40%
> ⅗ of any number is 60%
> ⅘ of any number is 80%

Well, if it's that easy, we should all just try some then!   Go on then cheeky:

I.   Find **2/5** of 93.5 $5\overline{)9\,3.5}$ $\times \quad 2$ $=$

II.   Find **3/5** of 71.45 $5\overline{)7\,1.4\,5}$ $\times \quad 3$ $=$

III.   Find **4/5** of 2.070 $5\overline{)2.0\,7\,0}$ $\times \quad 4$ $=$

IV.   Find **2/5** of 2.070 $5\overline{)6\,9.8\,5}$ $\times \quad 2$ $=$

Write out these ones in your maths book:

1. Find 2/5 of 1680
2. Find 3/5 of 37.375
3. Find 4/5 of 7095
4. Find 2/5 of 5.690
5. Find 3/5 of 7405
6. Find 4/5 of 77.035
7. Find 2/5 of 2080
8. Find 3/5 of 47.70
9. Find 4/5 of 3705
10. Find 2/5 of 95.75

Fifth Avenue is a major thoroughfare going through Manhattan in New York City, United States. It is considered among the most expensive and best shopping streets in the world.   https://en.wikipedia.org/wiki/Fifth_Avenue

In New Zealand we celebrate 'Guy Fawkes' night on the 5th of November. We borrowed it from British history though – Guy Fawkes tried to blow up the English parliament building!

Dave Moran 2015