Divide by 4. *Stg E6 x/÷*   Name: _____

By now you have learned how to halve just about any number. This is good, because we can use that to help us divide numbers into 4 equal groups! All we do is chop it in half, then chop that in half again. Simply pimply.

E.g. **44 ÷ 4 = ??**   No problem: halve 44, which is 22, then halve again… **11**!   Ta-dah!

So, now try some for yourself:

1.   24 ÷ 4 = ??   Think: ½ of 24 = _____ then ½ of 12 = _____

2.   16 ÷ 4 = ??   Think: ½ of 16= _____ then ½ of ___ = _____

3.   48 ÷ 4 = ??   Think: ½ of 48 = _____ then ½ of ___ = _____

4.   16 ÷ 4 = ??   Think: ½ of 16 = _____ then ½ of ___ = _____

5.   40 ÷ 4 = ??   Think: ½ of 40 = _____ then ½ of ___ = _____

6.   8 ÷ 4 = ??   Think: ½ of 8 = _____ then ½ of ___ = _____

7.   12 ÷ 4 = ??   Think: ½ of 12 = _____ then ½ of ___ = _____

8.   32 ÷ 4 = ??   Think: ½ of 32 = _____ then ½ of ___ = _____

9.   20 ÷ 4 = ??   Think: ½ of 20 = _____ then ½ of ___ = _____

10. 36 ÷ 4 = ??   Think: ½ of 36 = _____ then ½ of ___ = _____

We can use our family of facts to help us remember these division basics too!

1. 4 x 3 = 12   3 x 4 = __   12 ÷ 4 = 3   __ ÷ 3 = 4

2. 4 x 5 = __   5 x 4 = __   __ ÷ 4 = 5   __ ÷ 5 = 4

3. 4 x 7 = __   7 x 4 = __   __ ÷ 4 = 7   __ ÷ 5 = 7

4. 4 x 9 = __   9 x 4 = __   __ ÷ 4 = 9   __ ÷ 9 = 4

5. 4 x 11 = __   11 x 4 = __   __ ÷ 4 = 11   __ ÷ 11 = 4

6. 4 x 4 = __   __ ÷ 4 = 4

7. 4 x 6 = __   6 x 4 = __   __ ÷ 4 = 6   __ ÷ 6 = 4

8. 4 x 8 = __   8 x 4 = __   __ ÷ 4 = 8   __ ÷ 8 = 4

> **Q. Which tables do you not have to learn?**
> A. Dinner tables. That's not even funny.

Divide by 4. *Stg 6 x/÷*

Name: _____

We have learned that to divide numbers by 4, we can halve, then halve again. *Does this still work for bigger numbers?* You bet your wifi-password it does! It works especially well with multiples of 4 no matter how big they are. Let's start with these:

E.g.   516 ÷ 4 = ???   Half of 516 is 258. Then half of 258 is 129 – so 516 ÷ 4 **= 129**!

1. 136 ÷ 4 = ??   Think: ½ of 136 = _____ then ½ of 68   = _____

2. 224 ÷ 4 = ??   Think: ½ of 224 = _____ then ½ of _____ = _____

3. 148 ÷ 4 = ??   Think: ½ of 148 = _____ then ½ of _____ = _____

4. 428 ÷ 4 = ??   Think: ½ of 428 = _____ then ½ of _____ = _____

5. 616 ÷ 4 = ??   Think: ½ of 616 = _____ then ½ of _____ = _____

We can also split the big numbers up in a different way. We can use the fact that any 100s number divided by four is a multiple of 25 (because 100 divided by 4 is 25) and 1000s divided by 4 will be sets of 250.

 E.gs: 100 ÷ 4 -= 25   200 ÷ 4 = 50   300÷ 4 = 75   2000 ÷ 4 = 500

E.g. 348	a. 432	b. 652	c. 2428
÷ 4	÷ 4	÷ 4	÷ 4
¼ of 48 = 12	¼ of 32 = __	¼ of 52 = 13	¼ of 28 = __
+ ¼ of 300 = 75	+ ¼ of 400 = ___	+ ¼ of 600 = ___	+ ¼ of 400 = ___
= **87**	= ___	= ___	+ ¼ of 2000 = ____
			= ____

Can we divide tiny little numbers into 4 parts too? Why yes. Yes we can.

We can use our old friend 'place value' to help us quickly deal with decimal numbers.

E.g. **2.4 ÷ 4 = ??**   We know 24 ÷ 4 = 6. 2.4 is 10 times smaller than 24. So 2.4 ÷ 4 = **0.6**

1. 3.6 ÷ 4 = ??   Think **36 ÷ 4** = __   So **3.6 ÷ 4** must be ___

2. 0.8 ÷ 4 = ??   Think **8 ÷ 4** = __   So **0.8 ÷ 4** must be ___

3. 1.2 ÷ 4 = ??   Think **12 ÷ 4** = __   So **1.2 ÷ 4** must be ___

4. 2.8 ÷ 4 = ??   Think **28 ÷ 4** = __   So **2.8 ÷ 4** must be ___

5. 4.4 ÷ 4 = ??   Think **44 ÷ 4** = __   So **4.4 ÷ 4** must be ___

Tip: In the same way that 100 ÷ 4 is 25, it's useful to know that **1 ÷ 4 = 0.25** or ¼ of 1 = 0.25 (same thing).

Ok, what if I know my divided by 4 basic facts, but want a more efficient way of dividing big numbers by 4? Aha! I think you are ready for a standard division technique! Ask your teacher to show you how to do 'long-division'. You'll learn cool things like how to divide a number with a 'remainder'. (Not to be confused with a reindeer).