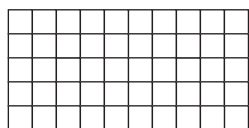


Another way to show this is on a number chart. Circling all of the 10 facts, or multiples of 10, reveals the pattern that corresponds to the blocks above.

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100									

Of course each fact can be built in the shape of a rectangle. Whenever illustrating with the blocks, also write it and say it as you build.



10 counted 5 times is the same as 50,  
or 10 times 5 equals 50,  
or 10 over and 5 up is 50.

Counting by 10 is the first step. After this is accomplished, say the factors slowly, and then ask the student to say the product. For example, you say “ten counted one time,” or “10 times one,” and the student says “10.” Continue by saying “10 times 2,” and the student says “20.” (I often have the student say “two-ty” as well as 20 to show there is order in our words.) Proceed through all the facts sequentially just as when the student learned to count by 10.

Here are the 10 facts with the corresponding numbering.

0	10	20	30	40	50	60	70	80	90	100
(10)(0)	(10)(1)	(10)(2)	(10)(3)	(10)(4)	(10)(5)	(10)(6)	(10)(7)	(10)(8)	(10)(9)	(10)(10)
	↑			↑				↑		
	10 counted 1 time			10 counted 4 times				10 counted 9 times		

0 x 0	0 x 1	0 x 2	0 x 3	0 x 4	0 x 5	0 x 6	0 x 7	0 x 8	0 x 9	0 x 10
1 x 0	1 x 1	1 x 2	1 x 3	1 x 4	1 x 5	1 x 6	1 x 7	1 x 8	1 x 9	1 x 10
2 x 0	2 x 1	2 x 2	2 x 3	2 x 4	2 x 5	2 x 6	2 x 7	2 x 8	2 x 9	2 x 10
3 x 0	3 x 1	3 x 2	3 x 3	3 x 4	3 x 5	3 x 6	3 x 7	3 x 8	3 x 9	3 x 10
4 x 0	4 x 1	4 x 2	4 x 3	4 x 4	4 x 5	4 x 6	4 x 7	4 x 8	4 x 9	4 x 10
5 x 0	5 x 1	5 x 2	5 x 3	5 x 4	5 x 5	5 x 6	5 x 7	5 x 8	5 x 9	5 x 10
6 x 0	6 x 1	6 x 2	6 x 3	6 x 4	6 x 5	6 x 6	6 x 7	6 x 8	6 x 9	6 x 10
7 x 0	7 x 1	7 x 2	7 x 3	7 x 4	7 x 5	7 x 6	7 x 7	7 x 8	7 x 9	7 x 10
8 x 0	8 x 1	8 x 2	8 x 3	8 x 4	8 x 5	8 x 6	8 x 7	8 x 8	8 x 9	8 x 10
9 x 0	9 x 1	9 x 2	9 x 3	9 x 4	9 x 5	9 x 6	9 x 7	9 x 8	9 x 9	9 x 10
10 x 0	10 x 1	10 x 2	10 x 3	10 x 4	10 x 5	10 x 6	10 x 7	10 x 8	10 x 9	10 x 10

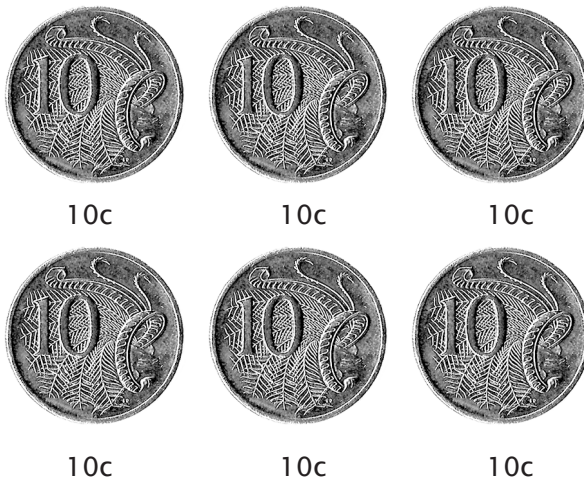
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### 10c Coins

A good place to apply maths is with money. We can ask how many cents in six 10 cent coins to apply  $6 \times 10$ . The answer is 60c.

#### Example 1

How many cents in six 10 cent coins?



$$6 \cdot 10c = 60c$$

We will be reviewing and using multiplication facts throughout the student textbook. If you find that you need more review of the multiplication facts, consult the Math-U-See Web site, which provides online drill and downloadable worksheets. Go to [www.mathusee.com](http://www.mathusee.com) and click on E-Sources.

### *Metric Measure Summary*

The entire metric system of measurement is based on multiplying by ten. Study the charts below. The basic unit is in bold in each list.

#### Liquid

10 millilitres = 1 centilitre  
10 centilitres = 1 decilitre  
10 decilitres = 1 **litre**  
10 litres = 1 dekalitre  
10 dekalitres = 1 hectolitre  
10 hectolitres = 1 kilolitre

#### Length

10 millimetres = 1 centimetre  
10 centimetres = 1 decimetre  
10 decimetres = 1 **metre**  
10 metres = 1 dekametre  
10 dekametres = 1 hectometre  
10 hectometres = 1 kilometre

#### Weight or Mass

10 milligrams = 1 centigram  
10 centigrams = 1 decigram  
10 decigrams = 1 **gram**  
10 grams = 1 dekagram  
10 dekagrams = 1 hectogram  
10 hectograms = 1 kilogram

Not all of these units are commonly used in everyday life. The student should become familiar with millimetre, centimetre, metre, kilometre, millilitre, litre, kilolitre, gram, and kilogram. Give lots of practice in weighing or measuring everyday items. Observe the weight, volume, or size of purchased items.

In the appropriate lessons, the student will practise changing one measure to another by multiplying by 10, 100 (10 x 10), and 1000 (10 x 10 x 10).

### *10 Millimetres = 1 Centimetre*

Get out a ruler and show the relationship between *millimetres* and *centimetres*. Use the ruler to measure different objects. The abbreviation for centimetre is cm and for millimetre is mm.

#### **Example 2**

Greg measured his pencil and found it was five centimetres long.  
How many millimetres long is his pencil?

$$10 \times 5 \text{ cm} = 50 \text{ mm}$$