

# Find the Product

Roll both dice and find the product. Check the answers; give one point for a correct answer and two points for the highest product of the round.

Player's Name	Round 1		Round 2		Round 3	
	Calculation	Score	Calculation	Score	Calculation	Score



# Multiplication Machines

I can multiply together three numbers.



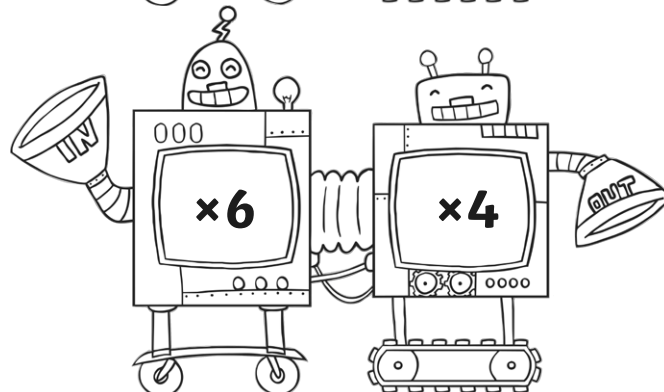
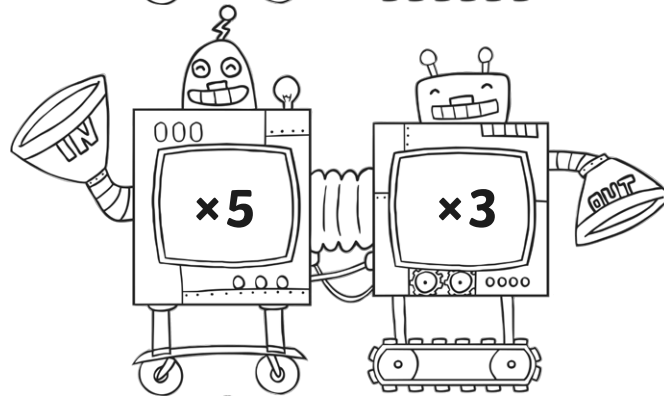
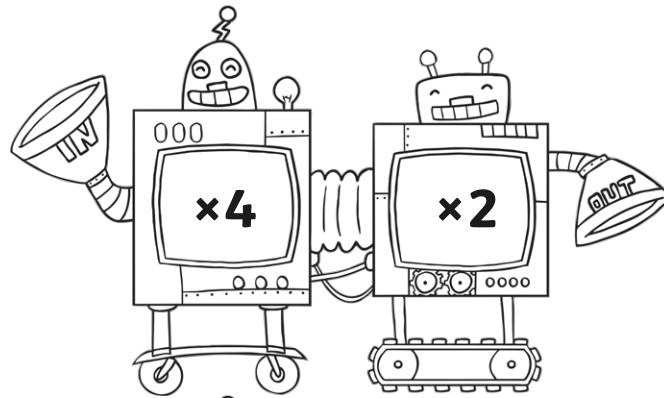
You will need a set of **0 - 12 digit cards**. Place all the digit cards face down in front of you. Then turn over one card and imagine it is going through the machine.

**5**

Write down a number sentence to describe what happens to the number as it goes through the machine:  $5 \times 4 = 20$      $20 \times 2 = 40$

Write down the number answer which will come out of the end:  $5 \times 4 \times 2 = 40$

Put ten numbers into each machine.





# Multiplication Machines

I can multiply together three numbers.



1. Put these numbers through the Multiplication Machine:

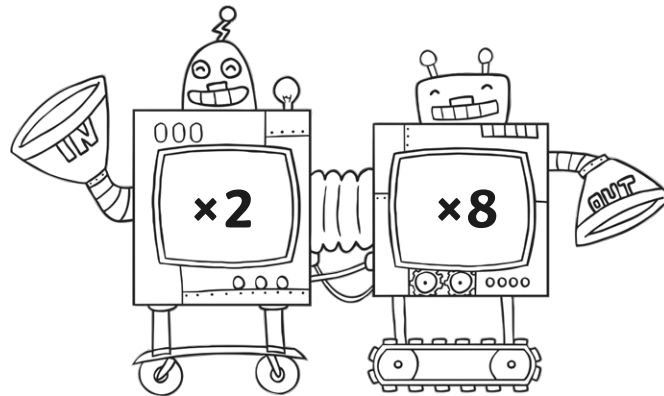
a) 6

b) 4

c) 5

d) 9

e) 12



2. What happens if you change the order of the calculation? Do you get a different answer?

a.  $6 \times 2 \times 8 =$

b.  $2 \times 6 \times 8 =$

c.  $8 \times 2 \times 6 =$

d.  $6 \times 8 \times 2 =$

e.  $4 \times 2 \times 8 =$

f.  $2 \times 4 \times 8 =$

g.  $8 \times 2 \times 4 =$

h.  $8 \times 4 \times 2 =$

What do you notice? Try to explain what you find out.

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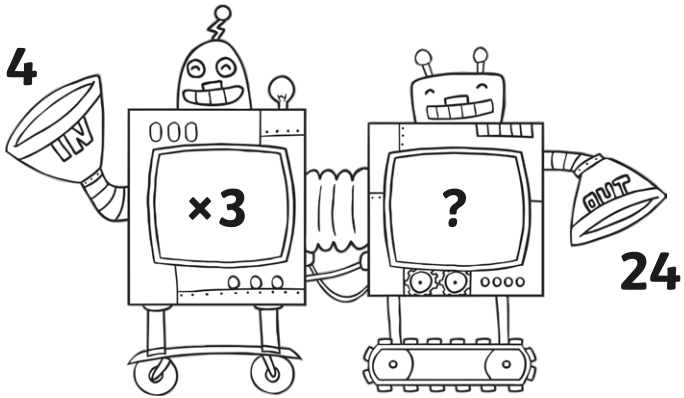
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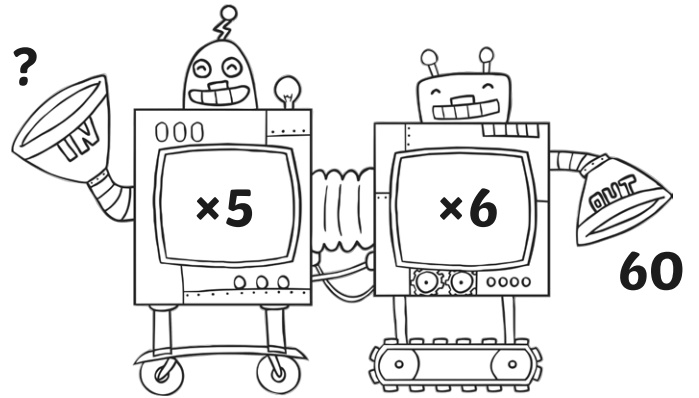


# Multiplication Machines

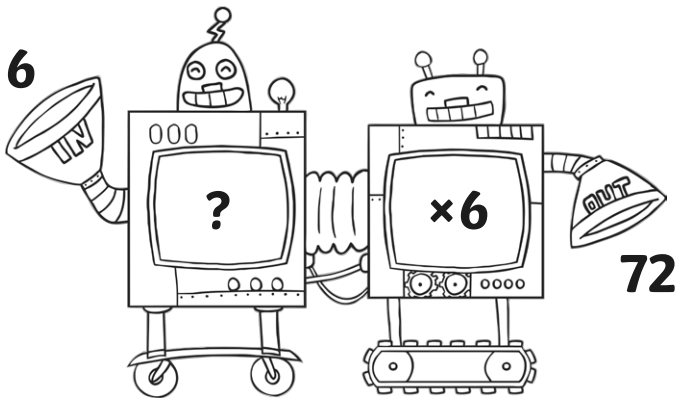
3. Can you work out what is missing from these machines?



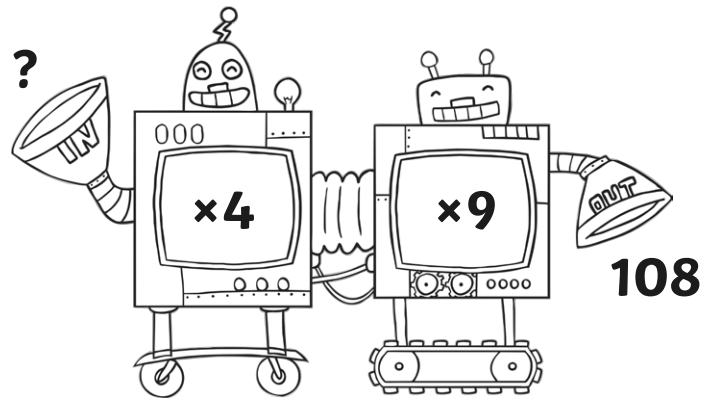
a. \_\_\_\_\_



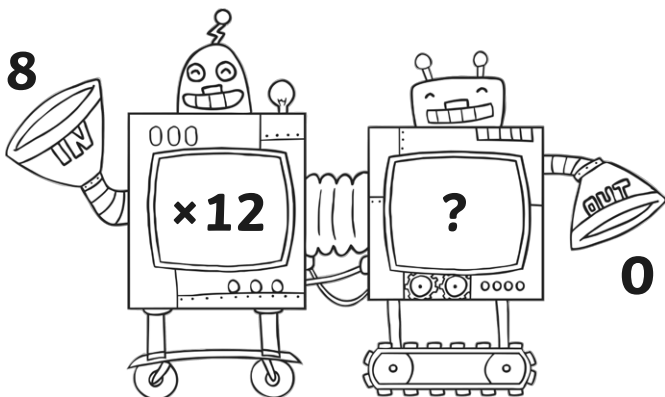
b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_



# Multiplication Machines **Answers**

1. Put these numbers through the Multiplication Machine:

- a.  $6 \times 2 \times 8 = 96$
- b.  $4 \times 2 \times 8 = 64$
- c.  $5 \times 2 \times 8 = 80$
- d.  $9 \times 2 \times 8 = 144$
- e.  $12 \times 2 \times 8 = 192$

2. What happens if you change the order of the calculation? Do you get a different answer?

- a.  $6 \times 2 \times 8 = \underline{96}$
- b.  $2 \times 6 \times 8 = \underline{96}$
- c.  $8 \times 2 \times 6 = \underline{96}$
- d.  $6 \times 8 \times 2 = \underline{96}$
- e.  $4 \times 2 \times 8 = \mathbf{64}$
- f.  $2 \times 4 \times 8 = \mathbf{64}$
- g.  $8 \times 2 \times 4 = \mathbf{64}$
- h.  $8 \times 4 \times 2 = \mathbf{64}$

**What do you notice? Try to explain what you find out.**

It doesn't matter what order you work them out in, you will get the same answer (or words to that effect).

3. What happens if you change the order of the calculation? Do you get a different answer?

- a.  $4 \times 3 \times \underline{2} = 24$
- b.  $\underline{2} \times 5 \times 6 = 60$
- c.  $6 \times \underline{2} \times 6 = 72$
- d.  $\underline{3} \times 4 \times 9 = 108$
- e.  $8 \times 12 \times \underline{0} = 0$



# Multiplication Machines

I can multiply together three numbers.



1. Put these numbers through the Multiplication Machine:

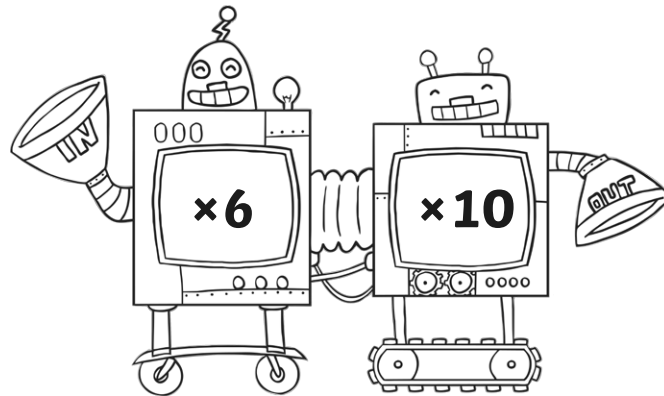
a) 6

b) 4

c) 5

d) 9

e) 12



2. What happens if you change the order of the calculation? Do you get a different answer?

a.  $6 \times 6 \times 10 =$

b.  $10 \times 6 \times 6 =$

c.  $6 \times 10 \times 6 =$

d.  $4 \times 6 \times 10 =$

e.  $6 \times 4 \times 10 =$

f.  $10 \times 4 \times 6 =$

g.  $6 \times 10 \times 4 =$

What do you notice? Try to explain what you find out.

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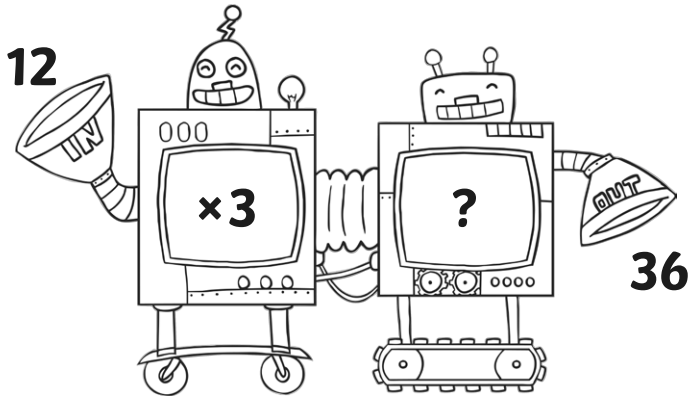
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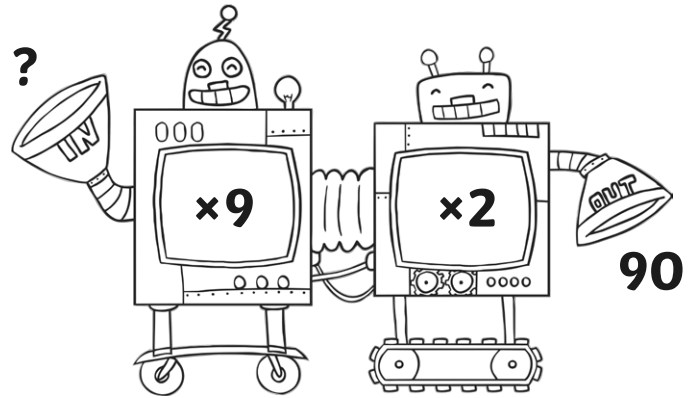


# Multiplication Machines

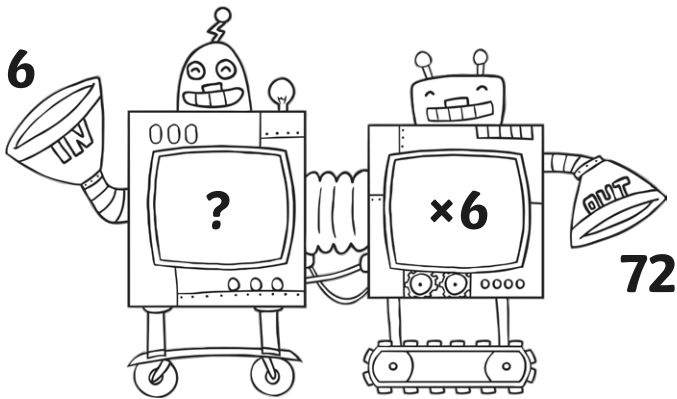
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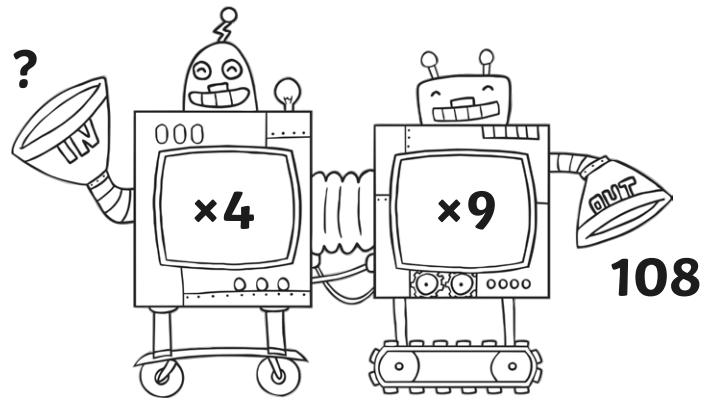
a. \_\_\_\_\_



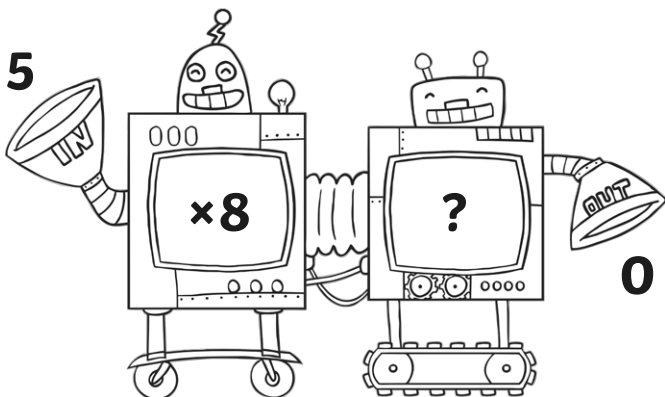
b. \_\_\_\_\_



c. \_\_\_\_\_



d. \_\_\_\_\_



e. \_\_\_\_\_



# Multiplication Machines **Answers**

1. Put these numbers through the Multiplication Machine:

a.  $6 \times 6 \times 10 = 360$

b.  $4 \times 6 \times 10 = 240$

c.  $5 \times 6 \times 10 = 300$

d.  $9 \times 6 \times 10 = 540$

e.  $12 \times 6 \times 10 = 720$

2. What happens if you change the order of the calculation? Do you get a different answer?

a.  $6 \times 6 \times 10 = \underline{360}$

b.  $10 \times 6 \times 6 = \underline{360}$

c.  $6 \times 10 \times 6 = \underline{360}$

d.  $4 \times 6 \times 10 = \underline{240}$

e.  $6 \times 4 \times 10 = \underline{240}$

f.  $10 \times 4 \times 6 = \underline{240}$

g.  $6 \times 10 \times 4 = \underline{240}$

**What do you notice? Try to explain what you find out.**

It doesn't matter what order you work them out in, you will get the same answer (or words to that effect).

3. What happens if you change the order of the calculation? Do you get a different answer?

a.  $12 \times 3 \times \underline{1} = 36$

b.  $\underline{5} \times 9 \times 2 = 90$

c.  $6 \times \underline{2} \times 6 = 72$

d.  $\underline{3} \times 4 \times 9 = 108$

e.  $8 \times 12 \times \underline{0} = 0$





# The Nines

I can investigate and describe patterns in the nine times table.



## The Nine Times Table Facts

$0 \times 9 =$

$5 \times 9 =$

$10 \times 9 =$

$1 \times 9 =$

$6 \times 9 =$

$11 \times 9 =$

$2 \times 9 =$

$7 \times 9 =$

$12 \times 9 =$

$3 \times 9 =$

$8 \times 9 =$

$4 \times 9 =$

$9 \times 9 =$

## Patterns in the Nine Times Table

The tens digits...

The ones digits...

If you add the digits in multiples of nine together...



# The Nines

I can investigate and describe patterns in the nine times table.



Make a presentation explaining the patterns that you discovered when investigating the nine times table. You must give lots of examples to help you to explain your ideas.



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Following your investigation into patterns in the nine times table, you have been asked to produce an educational video to explain your findings to a group of nine year olds.

Write a script for the video and make any props or visual aids that you might need.

Practise your performance and record it if possible.

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# The Sixes

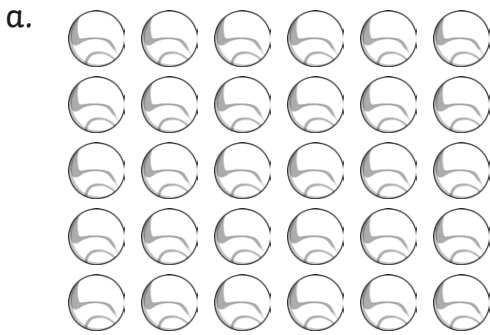
I can recall and use facts from the six times table.



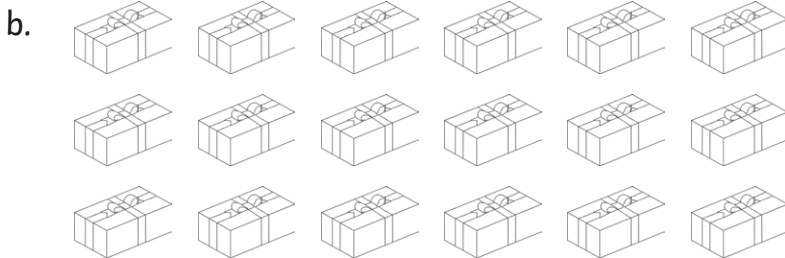
1. Fill in the missing numbers on the counting stick.



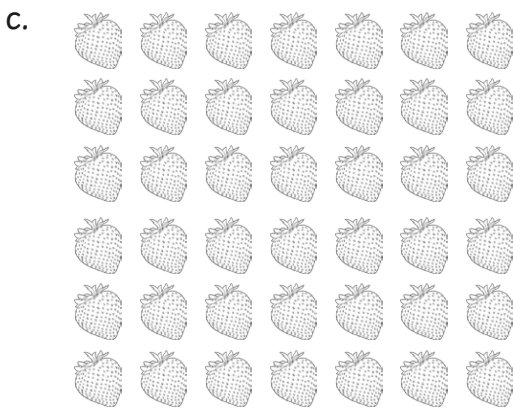
2. Write two multiplication and two division facts to go with these arrays.



$5 \times 6 = \underline{\quad}$ ,  $6 \times \underline{\quad} = 30$ ,  $30 \div 6 = \underline{\quad}$ ,  $30 \div 5 = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \times \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \times \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ ,  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$



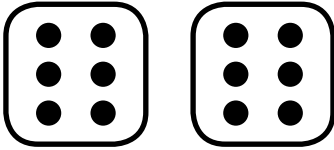
3. Circle the numbers which are NOT multiples of six.

a. 6, 12, 15, 20, 24, 32, 36

b. 60, 54, 46, 40, 36, 28, 24

4. I rolled some dice. The total number of spots facing upwards on the dice was 60. I only rolled sixes. How many dice did I roll?

Draw in the rest of the dice and write the division sentence to go with this problem.





# The Sixes Answers

1. Fill in the missing numbers on the counting stick.

0	6	<u>12</u>	18	<u>24</u>	<u>30</u>	36	42	<u>48</u>	54	60	<u>66</u>	72
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2. Write two multiplication and two division facts to go with these arrays.

a.  $5 \times 6 = 30$ ,  $6 \times 5 = 30$ ,  $30 \div 5 = 6$ ,  $30 \div 6 = 5$

b.  $3 \times 6 = 18$ ,  $6 \times 3 = 18$ ,  $18 \div 6 = 3$ ,  $18 \div 3 = 6$

c.  $7 \times 6 = 42$ ,  $6 \times 7 = 42$ ,  $42 \div 6 = 7$ ,  $42 \div 7 = 6$

3. Circle the numbers which are NOT multiples of six.

a. 6, 12, (15), (20), 24, (32), 36

b. 60, 54, (46), (40), 36, (28), 24

4. I rolled some dice. The total number of spots facing upwards on the dice was 60. I only rolled sixes. How many dice did I roll?

Draw in the rest of the dice and write the division sentence to go with this problem.

10 dice.



# The Sixes

I can recall and use facts from the six times table.



1. Write out the multiples of 6 from  $0 \times 6$  to  $11 \times 6$ . Put the multiples of six onto the counting stick.

0												72
---	--	--	--	--	--	--	--	--	--	--	--	----

2.  $11 \times 6 =$  \_\_\_\_\_
3.  $12 \times 6 =$  \_\_\_\_\_
4.  $20 \times 6 =$  \_\_\_\_\_
5. Circle the numbers which are NOT multiples of six.
- a. 6, 12, 15, 20, 24, 32, 36
- b. 60, 54, 46, 40, 36, 28, 24
6. Answer these division questions using your knowledge of the six times table.
- a.  $36 \div 6 =$  \_\_\_\_\_
- b.  $42 = 6 \times$  \_\_\_\_\_
- c.  $24 \div 6 =$  \_\_\_\_\_
- d.  $48 = 6 \times$  \_\_\_\_\_
7. I rolled some dice. The total number of spots facing upwards on the dice was 60. I only rolled sixes.  
How many dice did I roll? \_\_\_\_\_
8. I rolled some dice. The total number of spots facing upwards on the dice was 72. I only rolled sixes.  
How many dice did I roll? \_\_\_\_\_
9. Write your own word problem for this number sequence:  $18 \div 6 = 3$
- \_\_\_\_\_
10. Write your own word problem for this number sequence:  $54 \div 6 = 9$
- \_\_\_\_\_



# The Sixes Answers

1. Write out the multiples of 6 from  $0 \times 6$  to  $10 \times 6$ . Put the multiples of six onto the counting stick.

0	<u>6</u>	<u>12</u>	<u>18</u>	<u>24</u>	<u>30</u>	<u>36</u>	<u>42</u>	<u>48</u>	<u>54</u>	<u>60</u>	<u>66</u>	72
---	----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	----

2.  $11 \times 6 = \underline{66}$

3.  $12 \times 6 = \underline{72}$

4.  $20 \times 6 = \underline{120}$

5. Circle the numbers which are NOT multiples of six.

a. 6, 12, 15, 20, 24, 32, 36

b. 60, 54, 46, 40, 36, 28, 24

6. Answer these division questions using your knowledge of the six times table.

a.  $36 \div 6 = \underline{6}$

b.  $42 = 6 \times \underline{7}$

c.  $24 \div 6 = \underline{4}$

d.  $48 = 6 \times \underline{8}$

7. I rolled some dice. The total number of spots facing upwards on the dice was 60. I only rolled sixes.

How many dice did I roll? 10

8. I rolled some dice. The total number of spots facing upwards on the dice was 72. I only rolled sixes.

How many dice did I roll? 12

9. Write your own word problem for this number sequence:  $18 \div 6 = 3$

Multiple answers possible

10. Write your own word problem for this number sequence:  $54 \div 6 = 9$

Multiple answers possible





# The Sixes

I can recall and use facts from the six times table.



1. Highlight the multiples of six up to 100 on this 100 number square.

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

2. Which of these numbers are NOT multiples of six? Circle them.

a. 78, 18, 90, 76, 66, 58, 100, 99, 96

3. Insects have six legs. How many insects are there if I count...

a. 48 legs? \_\_\_\_\_

b. 84 legs? \_\_\_\_\_

c. 72 legs? \_\_\_\_\_

d. 24 legs? \_\_\_\_\_

e. 54 legs? \_\_\_\_\_



4. Stefan keeps stick insects as pets. Each carrier is a habitat for six stick insects. How many carriers has...

a. 10 stick insects? \_\_\_\_\_

b. 19 stick insects? \_\_\_\_\_

c. 50 stick insects? \_\_\_\_\_

5. Write your own word problem for this number sequence:  $18 \div 6 = 3$

---

---

6. Write your own word problem for this number sequence:  $54 \div 6 = 9$

---

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# The Sixes Answers

1. Highlight the multiples of six up to 100 on this 100 number square.

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

2. Which of these numbers are NOT multiples of six? Circle them.

a. 78, 18, 90, 76, 66, 58, 100, 99, 96

3. Insects have six legs. How many insects are there if I count...

- a. 48 legs? 8
- b. 84 legs? 14
- c. 72 legs? 12
- d. 24 legs? 16
- e. 54 legs? 9



# The Sixes Answers

4. Stefan keeps stick insects as pets. Each carrier is a habitat for six stick insects. How many carriers has...
- a. 10 stick insects? 2
  - b. 19 stick insects? 4
  - c. 50 stick insects? 9
5. Write your own word problem for this number sequence:  $18 \div 6 = 3$   
Mutiple answers possible.
6. Write your own word problem for this number sequence:  $54 \div 6 = 9$   
Mutiple answers possible.

0

1

2

3

4

5

6

7

8

9

10

11

12



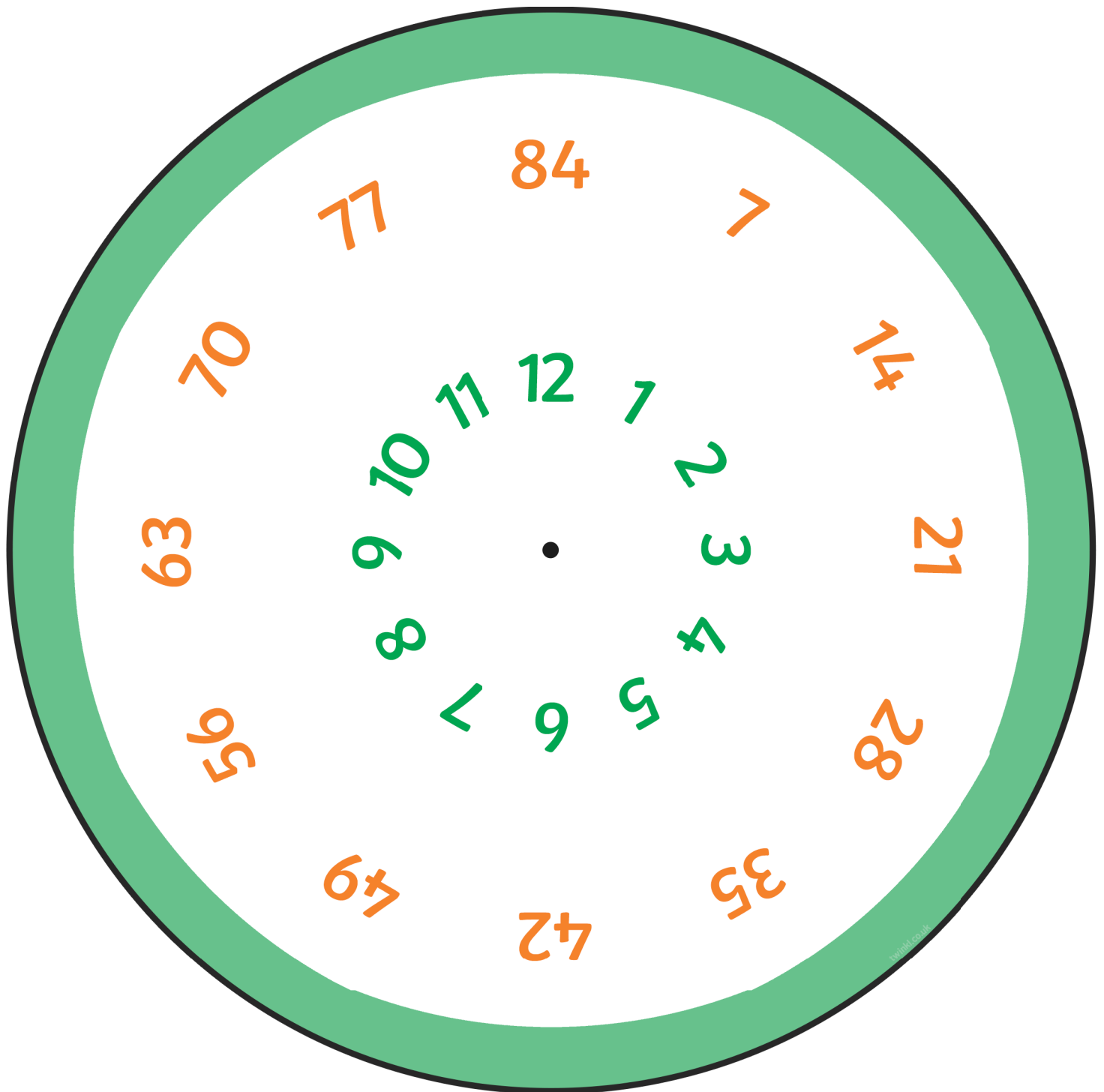
# Multiplication Spin Wheel

## Top Wheel



# Multiplication Spin Wheel

## Bottom Wheel





# The Sevens

I can recall multiplication and division facts from the seven times table.



How quickly can you fill in this multiplication grid?

x	7
2	
4	
12	
8	
1	
9	
3	
10	
5	
7	
6	
11	



# The Sevens

Can you complete this **division** grid using your seven times table facts?

$\div$	7
28	
49	
14	
70	
84	
35	
56	
63	
77	
7	
42	
21	



# The Sevens Answers

x	7
2	<b>14</b>
4	<b>28</b>
12	<b>84</b>
8	<b>56</b>
1	<b>7</b>
9	<b>63</b>
3	<b>21</b>
10	<b>70</b>
5	<b>35</b>
7	<b>49</b>
6	<b>42</b>
11	<b>77</b>

÷	7
28	<b>4</b>
49	<b>7</b>
14	<b>2</b>
70	<b>10</b>
84	<b>12</b>
35	<b>5</b>
56	<b>8</b>
63	<b>9</b>
77	<b>11</b>
7	<b>1</b>
42	<b>6</b>
21	<b>3</b>



# The Sevens

I can recall multiplication and division facts from the seven times table.



1. Fill in these grids as quickly as you can. Use facts from your seven times table.

x	7
2	
4	
12	
8	
1	
9	
3	
10	
5	
7	
6	
11	

÷	7
28	
49	
14	
70	
84	
35	
56	
63	
77	
7	
42	
21	

2. How many days are there in 6 weeks? \_\_\_\_\_
3. Helen had to wait eight weeks to collect her new puppy.  
How many days did she wait? \_\_\_\_\_
4. The month of February has exactly 28 days in it when it isn't a leap year.  
How many weeks is this? \_\_\_\_\_
5. It is 14 days until my birthday. How many weeks is this? \_\_\_\_\_



# The Sevens

6. Now write some of your own word problems to test your friends on their seven times table facts in the space below.



# The Sevens Answers

1. Fill in these grids as quickly as you can. Use facts from your seven times table.

x	7
2	<b>14</b>
4	<b>28</b>
12	<b>84</b>
8	<b>56</b>
1	<b>7</b>
9	<b>63</b>
3	<b>21</b>
10	<b>70</b>
5	<b>35</b>
7	<b>49</b>
6	<b>42</b>
11	<b>77</b>

÷	7
28	<b>4</b>
49	<b>7</b>
14	<b>2</b>
70	<b>10</b>
84	<b>12</b>
35	<b>5</b>
56	<b>8</b>
63	<b>9</b>
77	<b>11</b>
7	<b>1</b>
42	<b>6</b>
21	<b>3</b>

2. How many days are there in 6 weeks?  **$6 \times 7 = 42$**
3. Helen had to wait eight weeks to collect her new puppy.  
How many days did she wait?  **$8 \times 7 = 56$**
4. The month of February has exactly 28 days in it when it isn't a leap year.  
How many weeks is this? **4**
5. It is 14 days until my birthday. How many weeks is this? **2**





# The Sevens

I can recall multiplication and division facts from the seven times table.



1. Fill in these grids as quickly as you can. Use facts from your seven times table.

x	7
2	
4	
12	
8	
1	
9	
3	
10	
5	
7	
6	
11	

÷	7
28	
49	
14	
70	
84	
35	
56	
63	
77	
7	
42	
21	

2. How many days are there in nine weeks? \_\_\_\_\_
3. Helen had to wait 12 weeks to collect her new puppy.  
How many days did she wait? \_\_\_\_\_
4. The month of February has exactly 28 days in it when it isn't a leap year.  
How many weeks is this? \_\_\_\_\_
5. It is 140 days until my birthday. How many weeks is this? \_\_\_\_\_



# The Sevens

6. Now write some of your own word problems to test your friends on their seven times table facts in the space below.



# The Sevens Answers

1. Fill in these grids as quickly as you can. Use facts from your seven times table.

x	7
2	<b>14</b>
4	<b>28</b>
12	<b>84</b>
8	<b>56</b>
1	<b>7</b>
9	<b>63</b>
3	<b>21</b>
10	<b>70</b>
5	<b>35</b>
7	<b>49</b>
6	<b>42</b>
11	<b>77</b>

÷	7
28	<b>4</b>
49	<b>7</b>
14	<b>2</b>
70	<b>10</b>
84	<b>12</b>
35	<b>5</b>
56	<b>8</b>
63	<b>9</b>
77	<b>11</b>
7	<b>1</b>
42	<b>6</b>
21	<b>3</b>

2. How many days are there in nine weeks?  **$9 \times 7 = 63$**
3. Helen had to wait 12 weeks to collect her new puppy.  
How many days did she wait? **84**
4. The month of February has exactly 28 days in it when it isn't a leap year.  
How many weeks is this? **4**
5. It is 140 days until my birthday. How many weeks is this? **20**