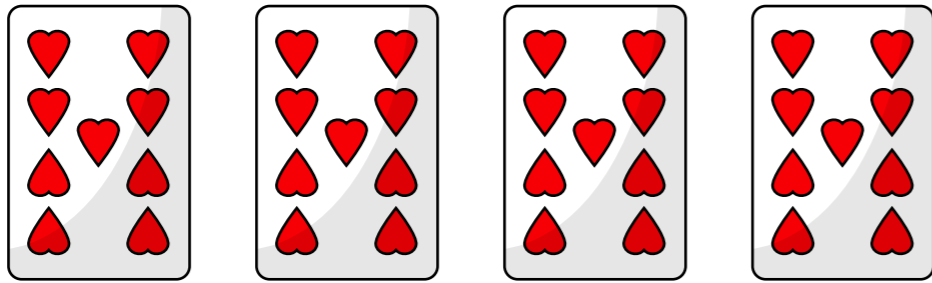


9 times-table and division facts

1 How many hearts are there in total?

Complete the multiplication fact.



$$\boxed{4} \times \boxed{9} = \boxed{36}$$

2 Colour all the multiples of 9

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

What pattern do you notice?

Use the 100 square to complete these calculations.

$$72 \div 9 = \boxed{8}$$

$$27 \div 9 = \boxed{3}$$

3 Complete the calculations.

$$\text{a) } 3 \times 9 = \boxed{27}$$

$$\text{g) } 6 \times 9 = \boxed{54}$$

$$\text{b) } \boxed{108} \div 9 = 12$$

$$\text{h) } 9 \times \boxed{2} = 18$$

$$\text{c) } 9 \times 4 = \boxed{36}$$

$$\text{i) } 9 \times \boxed{8} = 72$$

$$\text{d) } \boxed{9} \div 9 = 1$$

$$\text{j) } \boxed{99} \div 9 = 11$$

$$\text{e) } 11 \times 9 = \boxed{99}$$

$$\text{k) } \boxed{5} \times 9 = 45$$

$$\text{f) } 10 \times 9 = \boxed{90}$$

$$\text{l) } 20 \times 9 = \boxed{180}$$

4 Complete the number tracks.

0	9	18	27	36	45	54	63
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108	99	90	81	72	63	54	45	36
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5 These numbers are all multiples of 9

45 54 18 108

a) Show that the sum of the digits of each number is the same.

$4+5=9$ $5+4=9$ $1+8=9$ $1+0+8=9$

b) These numbers are also multiples of 9

198 657 891 999

What is the sum of the digits of each number?

$1+9+8=18$ $6+5+7=18$ $8+9+1=18$ $9+9+9=27$

c)

I've noticed something about the sum of the digits of numbers that are multiples of 9

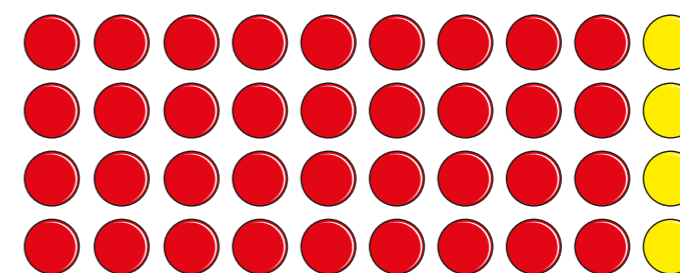


What do you think Whitney has noticed?

d) 7,59_ is a multiple of 9

What is the missing digit?

6 Jack is making arrays.



a) Use the arrays to complete the multiplications.

$1 \times 10 =$

$1 \times 9 =$

$2 \times 10 =$

$2 \times 9 =$

$3 \times 10 =$

$3 \times 9 =$

$4 \times 10 =$

$4 \times 9 =$

b) Write steps for a partner to explain how you can use the 10 times-table to multiply by 9

Multiply by 10 then subtract one lot of the number. E.g. $15 \times 9 = 15 \times 10 - 15 \times 1 = 150 - 15 = 135$

c) Use your steps to work out these multiplications.

$19 \times 9 =$

$72 \times 9 =$

