

# Hampshire Mathematics Team

## Multiplication templates

*One, ten, five derive...*

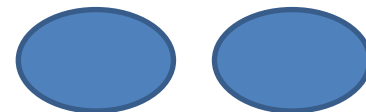
# 2 x table

Multiplication and Division Facts

***One, ten, five derive...***



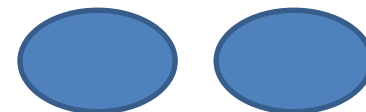
2



2+2=



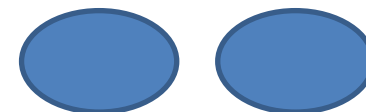
2+2+2=



2+2+2+2=



2+2+2+2+2=



2+2+2+2+2+2=



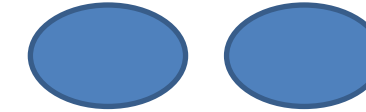
2+2+2+2+2+2+2=



2+2+2+2+2+2+2+2=

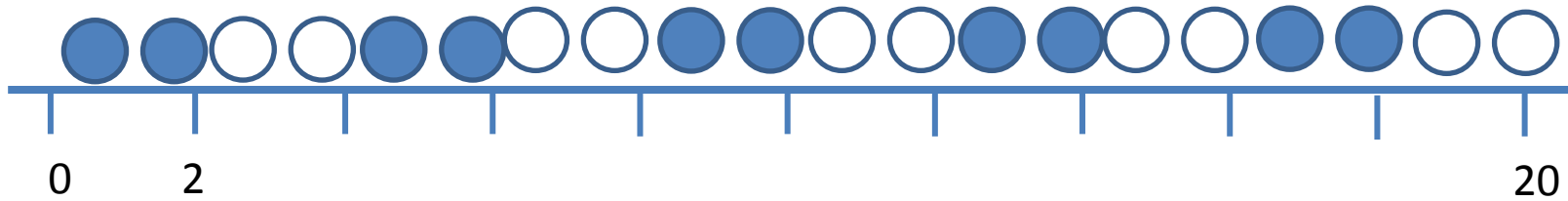
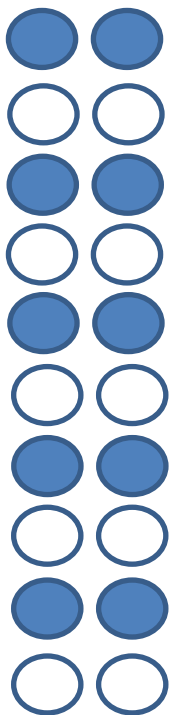


2+2+2+2+2+2+2+2+2=



2+2+2+2+2+2+2+2+2+2=







# Counting in 2s, Multiples of 2



2

$2 \times 1 =$



$2+2=$

$2 \times 2 =$



$2+2+2=$

$2 \times 3 =$



$2+2+2+2=$

$2 \times 4 =$



$2+2+2+2+2=$

$2 \times 5 =$



$2+2+2+2+2+2=$

$2 \times 6 =$



$2+2+2+2+2+2+2=$

$2 \times 7 =$



$2+2+2+2+2+2+2+2=$

$2 \times 8 =$



$2+2+2+2+2+2+2+2+2=$

$2 \times 9 =$



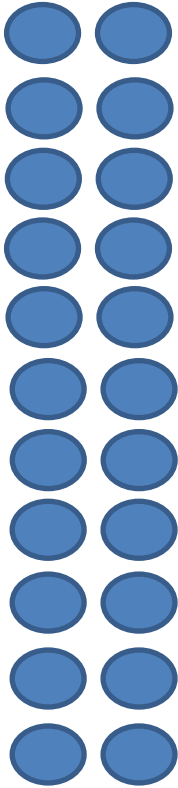
$2+2+2+2+2+2+2+2+2+2=$

$2 \times 10 =$



# Multiples of 2

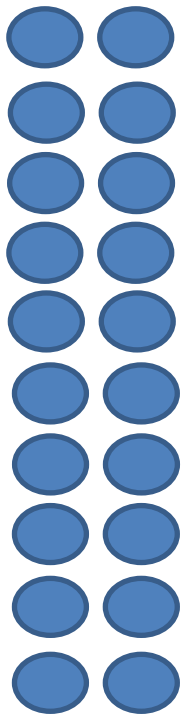
What is your favourite order for working out these linked facts?



- 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 =



# How many groups of 2 in multiples of 2...?



2

$2 \div 2 =$

4

$4 \div 2 =$

6

$6 \div 2 =$

8

$8 \div 2 =$

10

$10 \div 2 =$

12

$12 \div 2 =$

14

$14 \div 2 =$

16

$16 \div 2 =$

18

$18 \div 2 =$

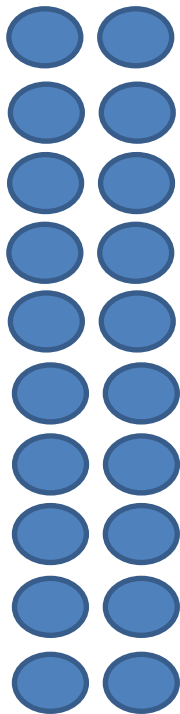
20

$20 \div 2 =$





# How many groups of 2 in any number...?



3

5

7

9

11

13

15

17

19

21

$3 \div 2 =$

$5 \div 2 =$

$7 \div 2 =$

$9 \div 2 =$

$11 \div 2 =$

$13 \div 2 =$

$15 \div 2 =$

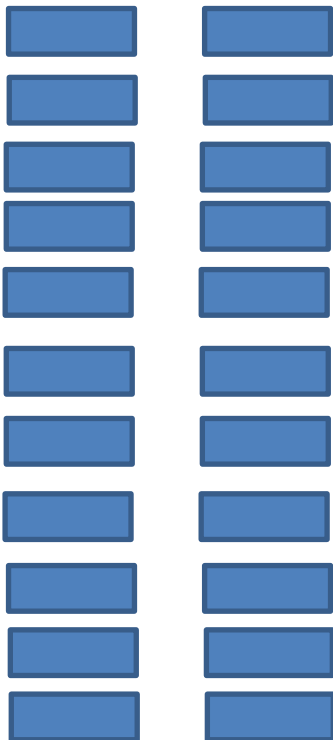
$17 \div 2 =$

$19 \div 2 =$

$21 \div 2 =$



# Multiples of 2, 20



10

10

$2 \times 1 =$

$20 \times 1 =$

$2 \times 2 =$

$20 \times 2 =$

$2 \times 3 =$

$20 \times 3 =$

$2 \times 4 =$

$20 \times 4 =$

$2 \times 5 =$

$20 \times 5 =$

$2 \times 6 =$

$20 \times 6 =$

$2 \times 7 =$

$20 \times 7 =$

$2 \times 8 =$

$20 \times 8 =$

$2 \times 9 =$

$20 \times 9 =$

$2 \times 10 =$

$20 \times 10 =$



0

2

20



0

20

200

# Dividing into groups of 2, 20



$10 \div 2 =$

$2 \div 2 =$

$8 \div 2 =$

$6 \div 2 =$

$14 \div 2 =$

$20 \div 2 =$

$4 \div 2 =$

$16 \div 2 =$

$12 \div 2 =$

$18 \div 2 =$



$100 \div 20 =$

$20 \div 20 =$

$80 \div 20 =$

$60 \div 20 =$

$140 \div 20 =$

$200 \div 20 =$

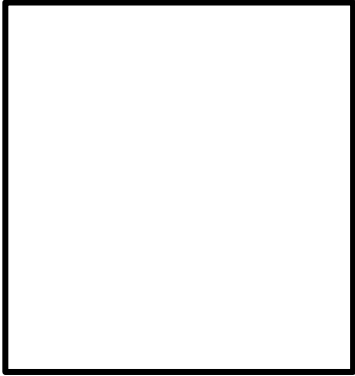
$40 \div 20 =$

$160 \div 20 =$

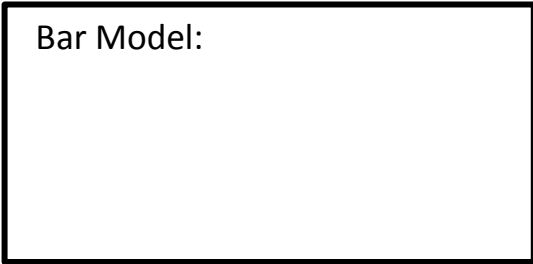
$120 \div 20 =$

$180 \div 20 =$

Array



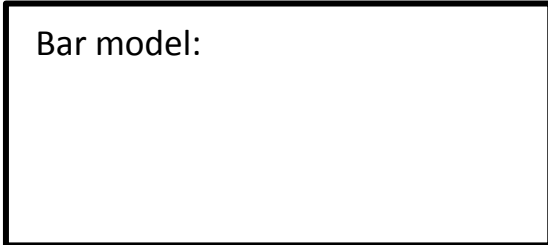
Bar Model:



Number line:



Bar model:

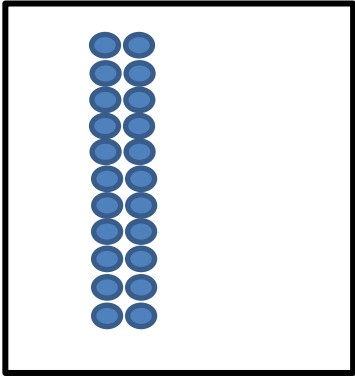


Number line:



$$2 \times 8 =$$

Array



$$200 \times 8 = 1600$$

$$800 \times 2 = 1600$$

$$0.2 \times 8 = 1.6$$

$$0.8 \times 2 = 1.6$$

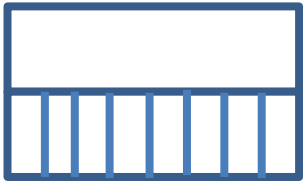
$$\frac{2}{10} \times 8 = \frac{16}{10} = 1 \frac{6}{10}$$

$$\frac{8}{10} \times 2 = \frac{16}{10} = 1 \frac{6}{10}$$

$$20 \times 8 = 160$$

$$80 \times 2 = 160$$

Bar Model:



$$8 \times 2 = 16$$

$$2 \times 8 = 16$$

$$16 \div 2 = 8$$

$$16 \div 8 = 2$$

Number line:



$$160 \div 2 = 80$$

$$160 \div 8 = 20$$

$$160 \div 20 = 8$$

$$160 \div 80 = 2$$

Bar model:

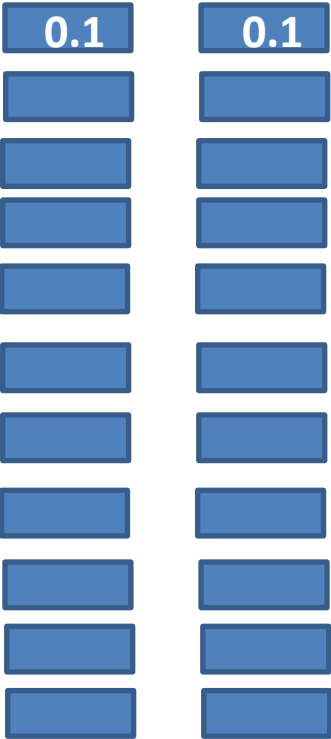
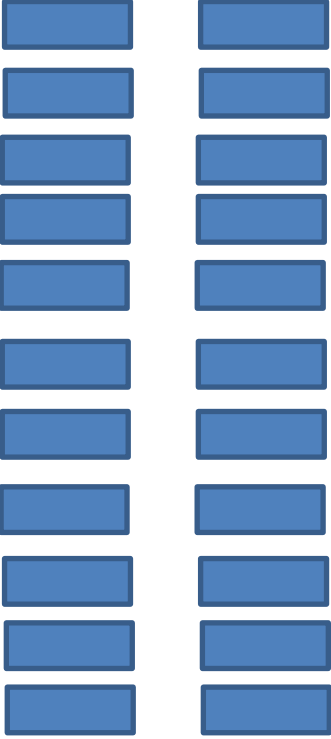


Number line:



Which sets of related facts would be appropriate for Y3, Y4, Y5?  
 Could pupils adjust the number lines, bar models to match?  
 Links to fractions?

# Multiples of 2, 0.2

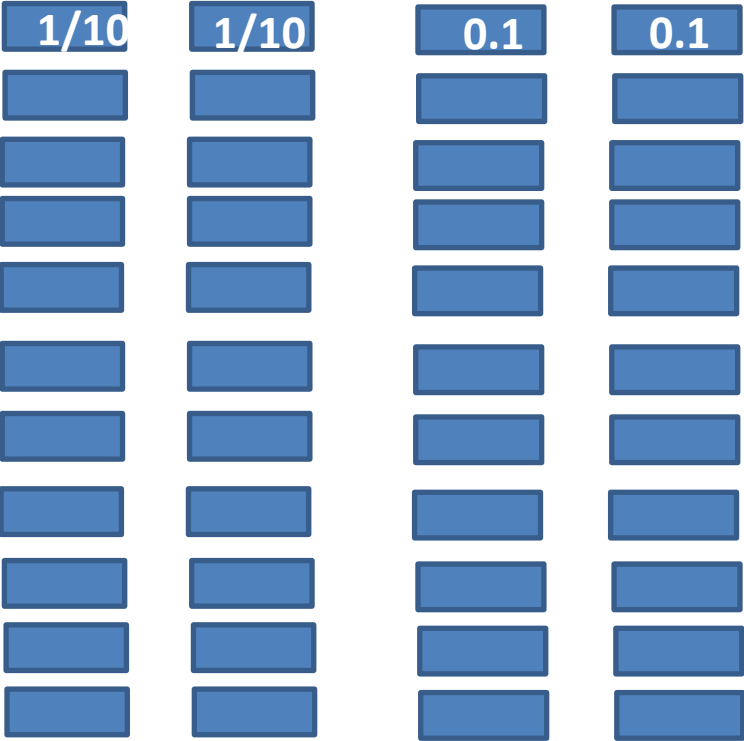


- 2 X1=
- 2 X2=
- 2 X3=
- 2 X4=
- 2 X5=
- 2 X6=
- 2 X7=
- 2 X8=
- 2 X9=
- 2X10=

- 0.2 x1=
- 0.2 x2=
- 0.2 x3=
- 0.2 x4=
- 0.2 x5=
- 0.2 x6=
- 0.2 X7=
- 0.2 X8=
- 0.2 X9=
- 0.2 X10=



# Multiples of 2/10, 0.2



- 2/10 X1=
- 2/10 X2=
- 2/10 X3=
- 2/10 X4=
- 2/10 X5=
- 2/10 X6=
- 2/10 X7=
- 2/10 X8=
- 2/10 X9=
- 2/10 X10=

- 0.2 x1=
- 0.2 x2=
- 0.2 x3=
- 0.2 x4=
- 0.2 x5=
- 0.2 x6=
- 0.2 X7=
- 0.2 X8=
- 0.2 X9=
- 0.2 X10=

2/10 X6= 12/10= 1 2/10



0      2/10

2



0      0.2

2

# Dividing into groups of 0.2, 2



$$1 \div 0.2 =$$
$$2 \div 0.2 =$$

$$0.2 \div 0.2 =$$
$$0.4 \div 0.2 =$$

$$0.8 \div 0.2 =$$
$$1.6 \div 0.2 =$$

$$0.6 \div 0.2 =$$
$$1.2 \div 0.2 =$$

$$1.4 \div 0.2 =$$
$$1.8 \div 0.2 =$$



$$10 \div 2 =$$
$$20 \div 2 =$$

$$2 \div 2 =$$
$$4 \div 2 =$$

$$8 \div 2 =$$
$$16 \div 2 =$$

$$6 \div 2 =$$
$$12 \div 2 =$$

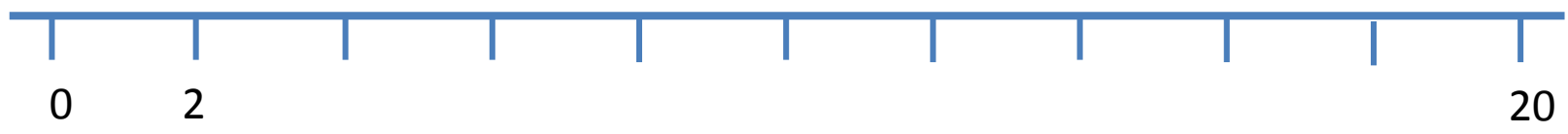
$$14 \div 2 =$$
$$18 \div 2 =$$



Dividing into groups of 0.2, 2, 20,



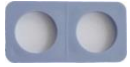
$1 \div 0.2 =$	$0.2 \div 0.2 =$	$0.8 \div 0.2 =$	$0.6 \div 0.2 =$	$1.4 \div 0.2 =$
$2 \div 0.2 =$	$0.4 \div 0.2 =$	$1.6 \div 0.2 =$	$1.2 \div 0.2 =$	$1.8 \div 0.2 =$



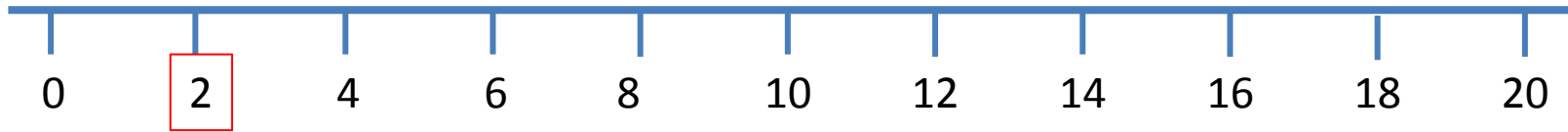
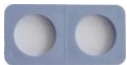
$10 \div 2 =$	$2 \div 2 =$	$8 \div 2 =$	$6 \div 2 =$	$14 \div 2 =$
$20 \div 2 =$	$4 \div 2 =$	$16 \div 2 =$	$12 \div 2 =$	$18 \div 2 =$



$100 \div 20 =$	$20 \div 20 =$	$80 \div 20 =$	$60 \div 20 =$	$140 \div 20 =$
$200 \div 20 =$	$40 \div 20 =$	$160 \div 20 =$	$120 \div 20 =$	$180 \div 20 =$

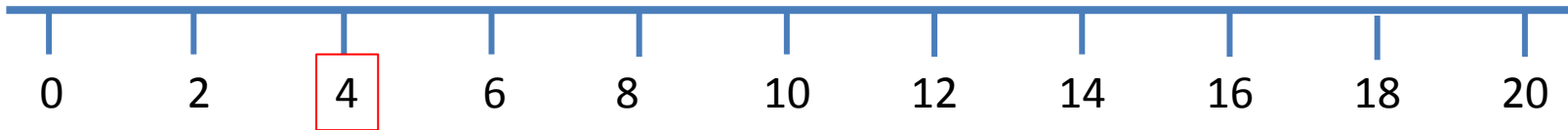


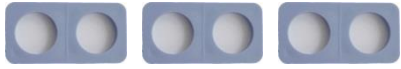
$$2 \times 1 = 2$$



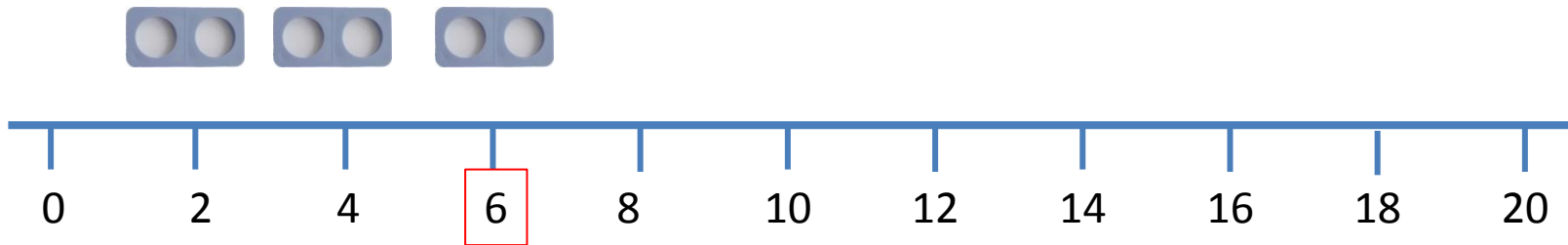


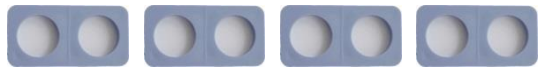
$$2 \times 2 = 4$$



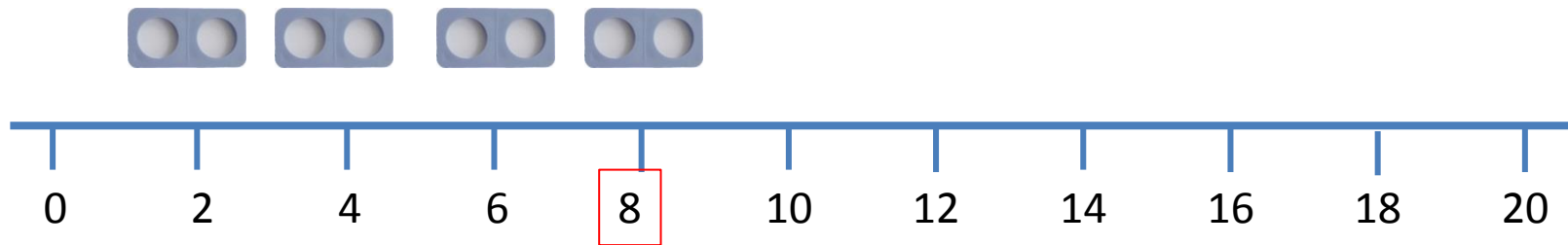


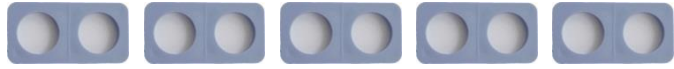
$$2 \times 3 = 6$$



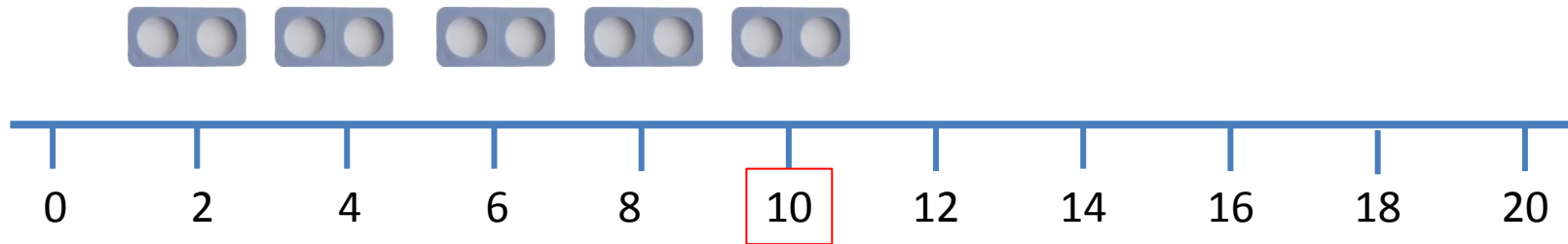


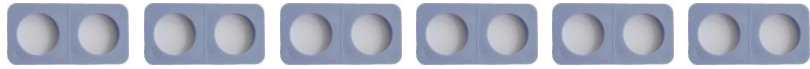
$$2 \times 4 = 8$$



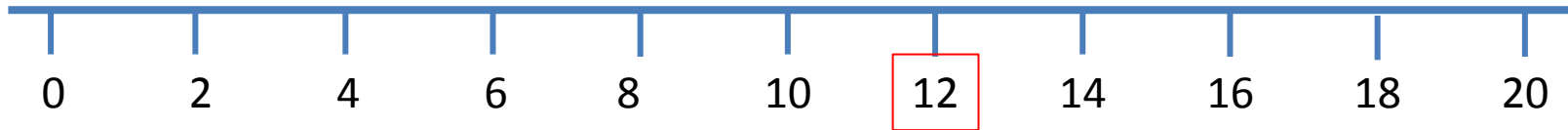


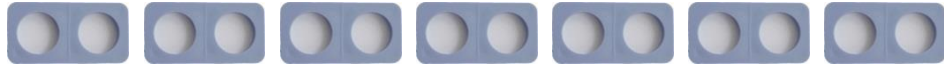
$$2 \times 5 = 10$$



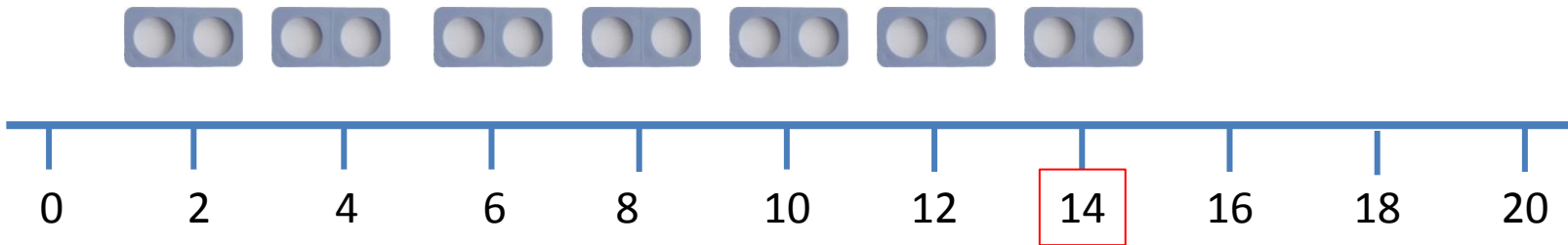


$$2 \times 6 = 12$$

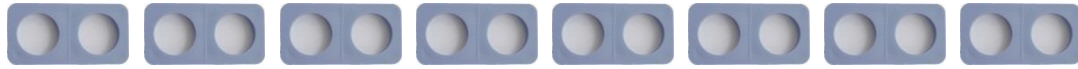




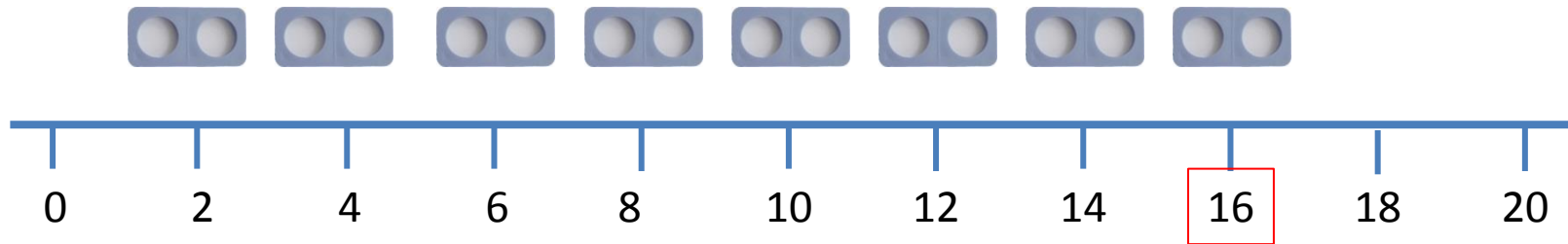
$$2 \times 7 = 14$$

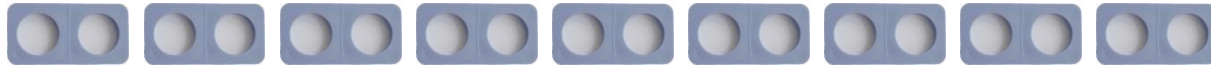




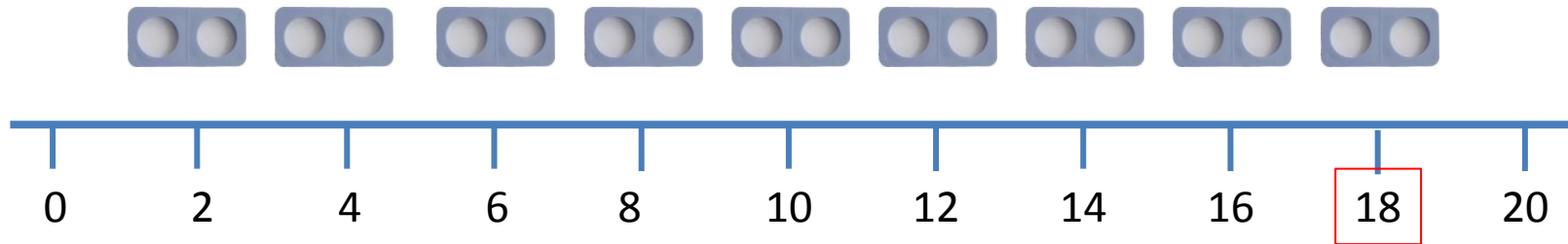


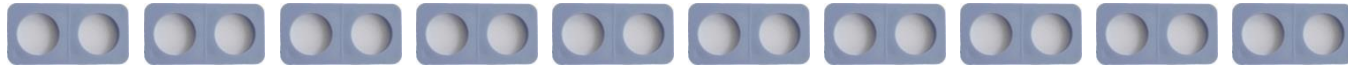
$$2 \times 8 = 16$$



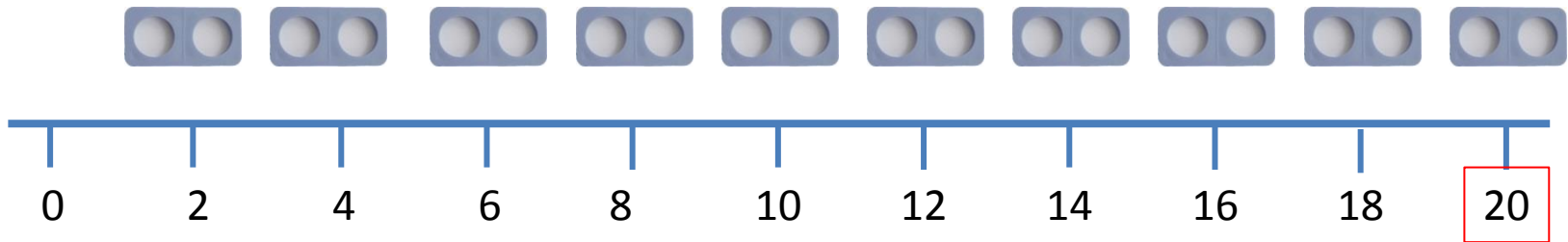


$$2 \times 9 = 18$$



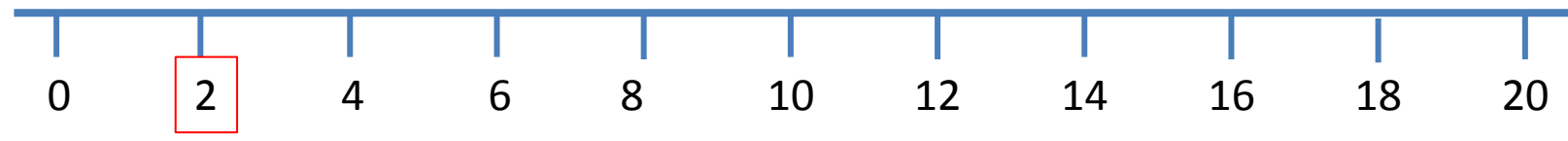


$$2 \times 10 = 20$$



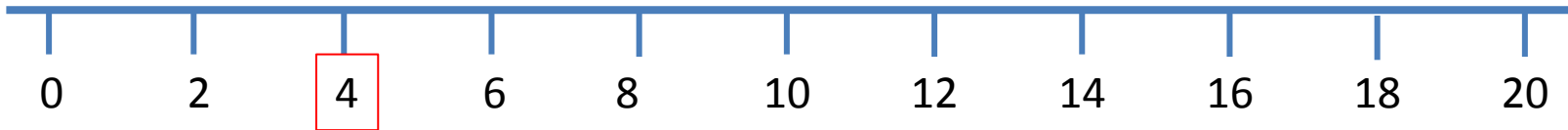


$$2 \times 1 = 2$$



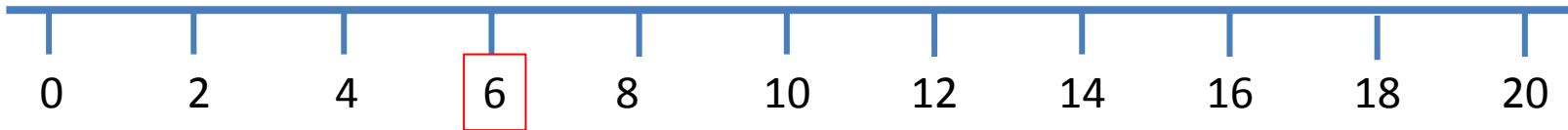


$$2 \times 2 = 4$$



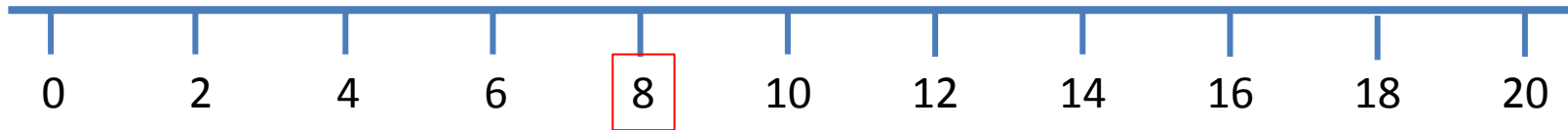


$$2 \times 3 = 6$$



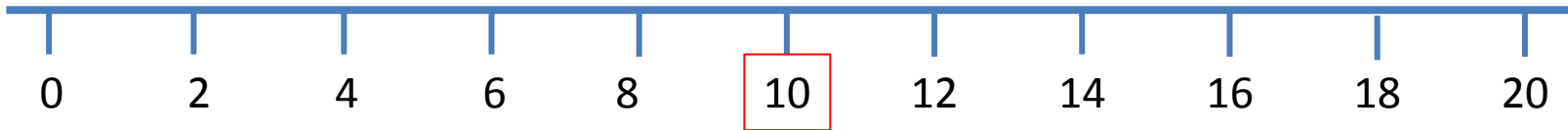


$$2 \times 4 = 8$$





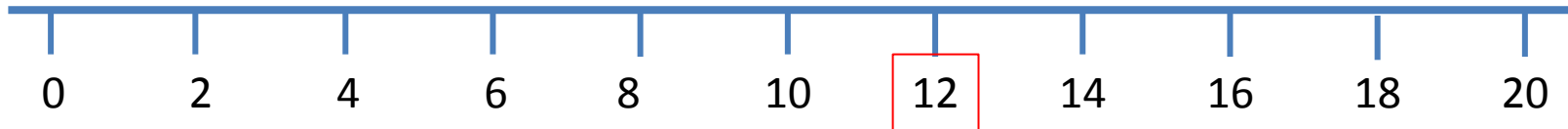
$$2 \times 5 = 10$$





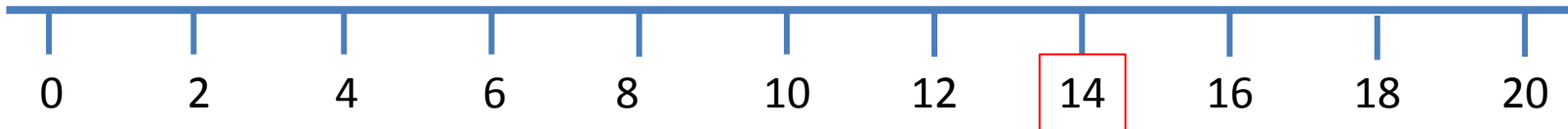


$$2 \times 6 = 12$$





$$2 \times 7 = 14$$





$$2 \times 8 = 16$$



16



$$2 \times 9 = 18$$



0

2

4

6

8

10

12

14

16

18

20



$$2 \times 10 = 20$$



0

2

4

6

8

10

12

14

16

18

20