

PRIME NUMBERS ACTIVITY



GET READY



- 1) What are the factors of 25?
- 2) How many factors does 26 have?
- 3) List the first 4 multiples of 7
- 4) Circle the number which is not a multiple of 4
14 28 36 44

1) What are the factors of 25?

1, 5, 25

2) How many factors does 26 have?

4 factors (1, 2, 13, 26)

3) List the first 4 multiples of 7

7, 14, 21, 28

4) Circle the number which is not a multiple of 4

14

28

36

44

LET'S LEARN



What are the factors of 10? ~~1, 2, 5, 10~~ 1, 2, 5, 10

$$1 \times 10 = 10$$

$$2 \times 5 = 10$$

How many factors does 10 have? 4 factors

Have a think



What are the factors of 21? 1, 3, 7, 21

$$1 \times 21 = 21$$

$$3 \times 7 = 21$$

How many factors does 21 have? 4 factors

Have a think



What are the factors of 32? 1, 2, 4, 8, 16, 32

$$1 \times 32 = 32$$

$$2 \times 16 = 32$$

$$4 \times 8 = 32$$

How many factors does 32 have? 6 factors

What are the factors of 9? 1, 3, 9, 9

$$1 \times 9 = 9$$

$$3 \times 3 = 9$$

How many factors does 9 have? 4 factors

9 has 3 factors

10 has 4 factors

21 has 4 factors

32 has 6 factors



Numbers with
more than two
factors

Composite numbers

Have a think



What are the factors of 5? **1, 5**

$$1 \times 5 = 5$$

How many factors does 5 have? **2 factors**

What are the factors of 11? **1, 11**

$$1 \times 11 = 11$$

How many factors does 11 have? **2 factors**

Have a think



Which other numbers between 1 and 20
have exactly two factors?

~~8~~

3

5

~~7~~1

11

13

17

19

Numbers with exactly
two factors

Prime numbers

Is 1 a prime number?

Prime number: a number with exactly two factors

Have a think



What are the factors of 1? 1

$$1 \times 1 = 1$$

How many factors does 1 have? 1

1 has one factor.

Prime numbers have exactly two factors.

Therefore, 1 is not a prime number.

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

The first prime number is 2

Shade all the multiples of 2 (but not 2) in orange.

Have a think



The next prime number is 3

Shade in all the multiples of 3 (but not 3) in orange.

Repeat for the multiples of all the prime numbers up to 7

How many prime numbers between 1 and 100 are there?

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

There are 25 prime numbers between 1 and 100

$\frac{1}{4}$

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 patterns do you notice?

2 is the only even prime number.