

Imagine Xavi also had a scarf, with all the numbers from 2 to 100 in a straight line.

Click on the purple cog (Settings) of the scarf interactivity below and try each of the games in turn.

In each case, you will be offered an image of part of the scarf.

Can you figure out which numbers the circles represent?

We hope many of you will share screenshots of the challenges you have worked on, along with your reasoning of how you used the 'clues' to solve the problem.

## Xavi's Scarf

1. Since it has no prime factors it must be a prime number.

Same here

That's correct!

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New Game

New Colours

4. They all have the correct pattern/number of prime factors.

No because there are too many prime factors.

Not this because 2 is a Prime

Not this because it only has 2 prime factors

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 two same factors so it can't be this.

Prime number

multiple of 2

2. We know that the circle is a prime which is next 2 away from another prime number.

3. We know the numbers beside it have 1 same common factor.