

RECALL



1. List the common factors of 12 and 15
 - Use an array, a Venn Diagram and a factor bug

2. Are any of these numbers prime numbers?

Guided practice - My turn

- ▶ a) There are 13 rugby players, what equal groups can the players make?
- ▶ b) There are 9 tennis players and 7 basketball players.
- ▶ Which of the teams can split into equal groups in more ways?



help

- ▶ A times table grid or arrays may be helpful



- ▶ Which of these numbers are prime numbers? How do you know?

Guided practice - Your turn

- ▶ a) There are 15 rugby players, what equal groups can the players make?
- ▶ b) There are 13 tennis players and 12 basketball players.
- ▶ Which of the teams can split into equal groups in more ways?



help

- ▶ A times table grid or arrays may be helpful

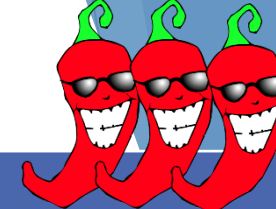
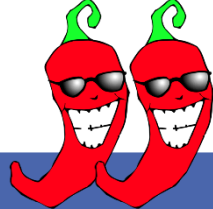


- ▶ Which of these numbers are prime numbers? How do you know?



- ▶ Follow the steps below to use a 100 square to find all the prime numbers between 0 and 100.
- ▶ Step 1: Start with one and cross it out because it only has one factor and prime numbers have 2 different ones.
- ▶ Step 2: 2 is a prime number. Circle it and cross out all the multiples of 2.
- ▶ Step 3: 3 is a prime number. Circle it and cross out all the multiples of 3.
- ▶ Step 4: 5 is a prime number. Circle it and cross out all the multiples of 5
- ▶ Step 5: 7 is a prime number. Circle it and cross out all the multiples of 7.
- ▶ Step 6: circle all the numbers that are not crossed out. Are they all prime numbers?

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



Draw all the possible arrays for each of these numbers

15

17

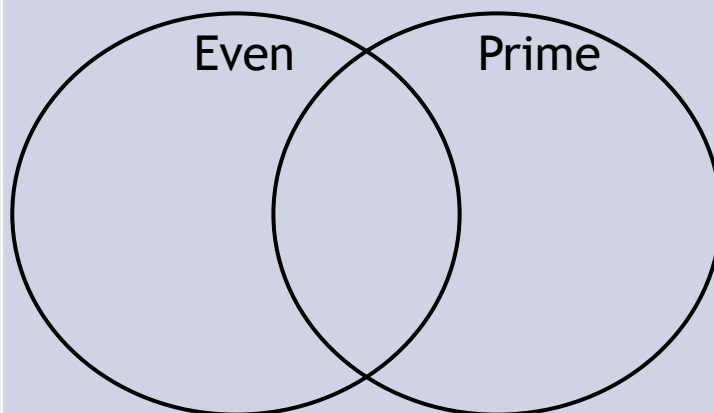
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21

Which are prime numbers and which are composite numbers?

Draw this Venn diagram in your book and place each number in the correct group.

1, 2, 5, 11, 12, 15, 31, 99



Investigate these numbers and complete the table.

Number of players	What different arrays can they make	How many factors	Prime or composite
12			
11			
10			
9	3x3, 1x 9	3	Composite
8			
7	1x7	2	Prime
6			
5			



Dive Deeper 1

1)

Which numbers are in the wrong place?

Prime Numbers	Composite Numbers
33	12
10	26
11	31
2	40

7 Here are some numbers.

126

175

2,378

777

381

9,000



Tommy

The numbers are big. It is hard to check if they are prime.

I can tell quickly that none of these numbers are prime.



Annie

How does Annie know that none of the numbers are prime?

3)

Find all the prime numbers between 10 and 100, sort them in the table below.

End in a 1	End in a 3	End in a 7	End in a 9

Why do no two-digit prime numbers end in an even digit?

Why do no two-digit prime numbers end in a 5?

4)

3a. Are the following statements true or false?



Max

23 is a prime number.



Luna

The largest prime number less than thirty is 29.



Jacob

Even numbers are not prime numbers.

Explain why.



Dive Deeper 2

1)

Sort all the prime numbers between 10 and 100 into the table.

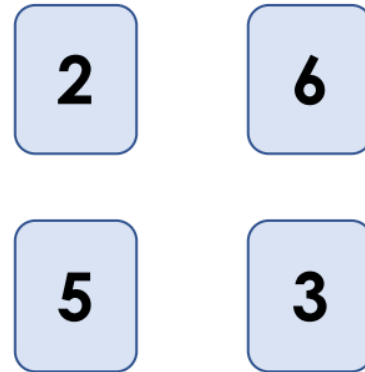
Number of ones			
1	3	7	9

Why do no 2-digit prime numbers have 0, 2, 4, 6 or 8 ones?

Why do no 2-digit prime numbers have 5 ones?

2a. Make all of the possible prime numbers using the digits cards below.

2)



3)

Question 3: From the box, choose:

- (a) the smallest prime number
- (b) a prime number that is greater than 10
- (c) an even prime number
- (d) the largest prime number
- (e) three numbers that are not prime

