

# GCD and LCM

Fill in the table below.

A	B	A x B	GCD (A,B)	LCM (A,B)	GCD x LCM
1. 16	12				
2. 25	40				
3. 24	39				
4. 88	66				
5. 35		2100			
6.	45	2250			
7.	14		2		1204
8.			6	72	
9.		3920	14		
10. 72				1008	

List patterns you discovered.

# GCD and LCM

Fill in the table below.

	A	B	A x B	GCD (A,B)	LCM (A,B)	GCD x LCM
1.	16	12	192	4	48	192
2.	25	40	1000	5	200	1000
3.	24	39	936	3	312	936
4.	88	66	5808	22	264	5808
5.	35	60	2100	5	420	2100
6.	50	45	2250	5	450	2250
7.	86	14	1204	2	602	1204
8.	6	72	432	6	72	432
	18	24	432	6	72	432
9.	14	280	3920	14	280	3920
	56	70	3920	14	280	3920
10.	72	112	8064	8	1008	8064
	72	336	24192	24	1008	24192
	72	1008	72576	72	1008	72576

List patterns you discovered.

# GCD and LCM

An example of a pattern:

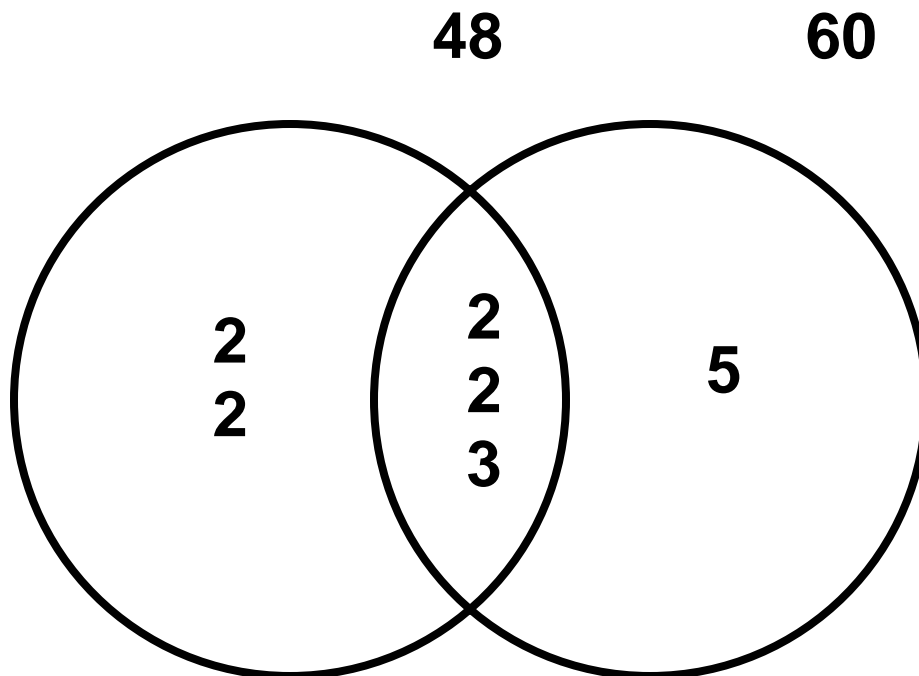
$$A \times B = \text{GCD}(A,B) \times \text{LCM}(A,B)$$

Another example of a pattern:

A	B	A x B	GCD (A,B)	LCM (A,B)	GCD x LCM
72 $2^3 \times 3^2$	112 $2^4 \times 7^1$ $\times 3^0$	8064 $2^7 \times 3^2$ $\times 7^1$	8 $2^3 \times 3^0$	1008 $2^4 \times 3^2$ $\times 7^1$	8064 $2^7 \times 3^2 \times 7^1$
72 $2^3 \times 3^2$	336 $2^4 \times 7^1$ $\times 3^1$	24192 $2^7 \times 3^3$ $\times 7^1$	24 $2^3 \times 3^1$	1008 $2^4 \times 3^2$ $\times 7^1$	24192 $2^7 \times 3^3 \times 7^1$
72 $2^3 \times 3^2$	1008 $2^4 \times 7^1$ $\times 3^2$	72576 $2^7 \times 3^4$ $\times 7^1$	72 $2^3 \times 3^2$	1008 $2^4 \times 3^2$ $\times 7^1$	72576 $2^7 \times 3^4 \times 7^1$

We know that B must include  $2^4$  and 7. What we don't know is whether B includes  $3^0$  or  $3^1$  or  $3^2$ . Each choice provides a separate possible answer.

## Using Venn Diagrams For GCD and LCM



$$\text{GCD } (48, 60) = 2 \times 2 \times 3 = 12$$

$$\text{LCM } (48, 60) = 2 \times 2 \times 2 \times 2 \times 3 \times 5 = 240$$

# Using Venn Diagrams For GCD and LCM

