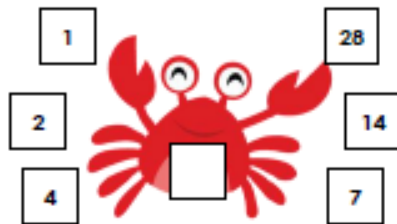


LO: To identify factor pairs

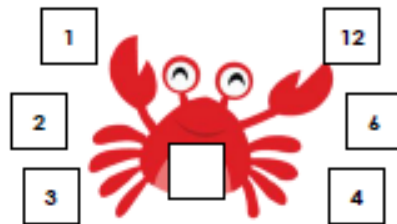
Challenge 1

1a. Complete the factor crab.



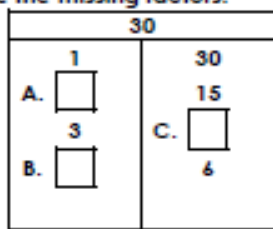
VF

1b. Complete the factor crab.



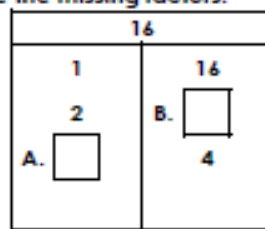
VF

2a. Write the missing factors.



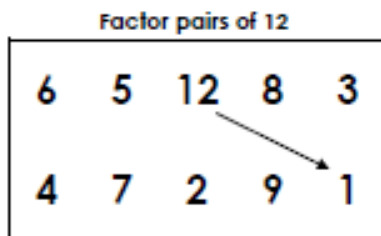
VF

2b. Write the missing factors.



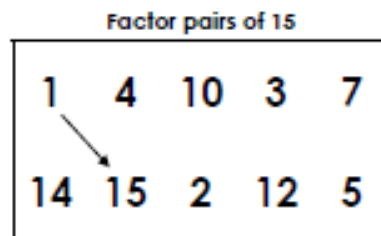
VF

3a. Draw lines to match the factor pairs.



VF

3b. Draw lines to match the factor pairs.



VF

4a. Circle all the factor pairs of 24.

- 8×3 7×4 6×5
 3×9 4×6
 5×4 2×12 1×24



VF

4b. Circle all the factor pairs of 18.

- 3×5 9×2
 1×18 2×8 4×4
 3×6 7×3



VF

Challenge 2

5a. Complete the factor crab.

1 56
2 28
4 14
7 8



VF

5b. Complete the factor crab.

1 32
2 16
4 8



VF

6a. Write the missing factors.

48	
1	48
A. <input type="text"/>	24
3	C. <input type="text"/>
B. <input type="text"/>	12
6	D. <input type="text"/>



VF

6b. Write the missing factors.

42	
1	42
2	B. <input type="text"/>
A. <input type="text"/>	14
6	C. <input type="text"/>



VF

7a. Draw lines to match the factor pairs.

Factor pairs of 24

24	5	4	8	2
7	12	1	6	3

An arrow points from 24 to 1.



VF

7b. Draw lines to match the factor pairs.

Factor pairs of 28

28	7	13	5	14
2	1	4	12	9

An arrow points from 28 to 1.



VF

8a. Circle all the factor pairs of 36.

2×18 13×3 6×6
 12×3 5×6 8×4
 8×7 9×4 1×36



VF

8b. Circle all the factor pairs of 54.

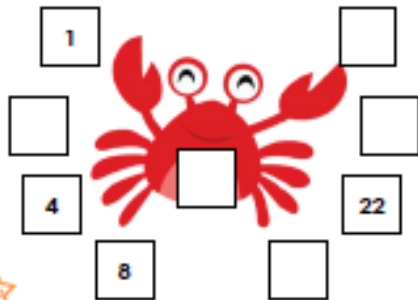
1×54 13×4 12×6
 8×7 3×18 16×7
 17×4 2×27 6×9



VF

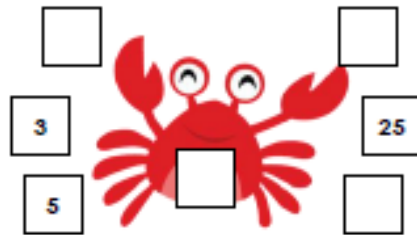
Challenge 3

9a. Complete the factor crab.



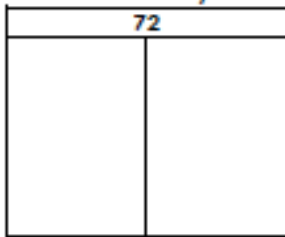
VT

9b. Complete the factor crab.



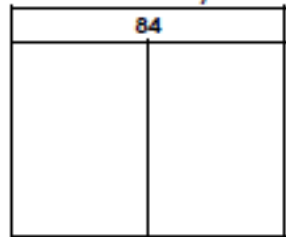
VT

10a. Explore methodically the factors of 72.



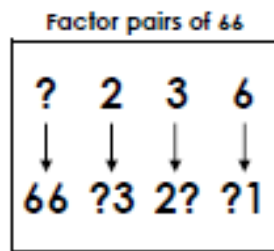
VT

10b. Explore methodically the factors of 84.



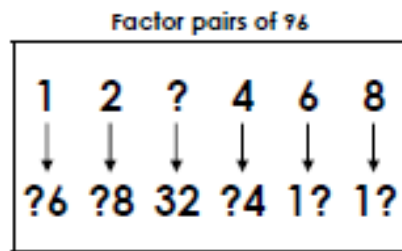
VT

11a. Complete the factor pairs.



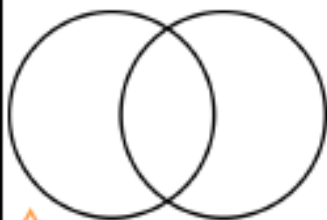
VT

11b. Complete the factor pairs.



VT

12a. Sort the factor pairs below into the Venn Diagram. Label the diagram.

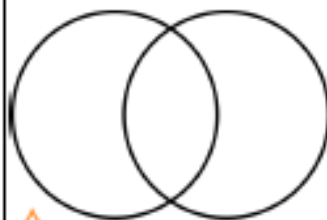


6 x 15	2 x 45
6 x 16	9 x 10
5 x 18	32 x 3
1 x 90	12 x 8
3 x 30	96 x 1



VT

12b. Sort the factor pairs below into the Venn Diagram. Label the diagram.



9 x 11	12 x 8
1 x 92	23 x 4
18 x 8	17 x 8
4 x 28	33 x 3
2 x 46	1 x 99



VT

Extension

4a. Lois is planting seeds in her garden in rows. The total number of seeds has these two factors and is less than 60.



How many seeds might she have?

Find 3 possible answers.



PS

4b. Marek is baking buns for a party. The total number of buns has these two factors and is less than 60.



How many buns might he have made?

Find 3 possible answers.



PS

5a. Razia says,



All numbers have an even number of factor pairs.

Is Razia correct? Prove it.



R

5b. David says,



An odd number will always have an odd number of factor pairs.

Is David correct? Prove it.



R

Answers

Developing

- 1a. 28
 2a. $A = 2$; $B = 5$; $C = 10$
 3a. 1×12 ; 2×6 ; 3×4
 4a. 1×24 ; 2×12 ; 4×6 ; 8×3

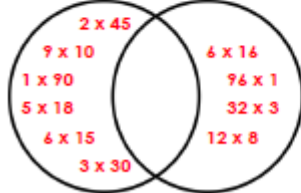
Expected

- 5a. 56
 6a. $A = 2$; $B = 4$; $C = 16$; $D = 8$
 7a. 1×24 ; 2×12 ; 3×8 ; 4×6
 8a. 1×36 ; 2×18 ; 3×12 ; 6×6 ; 9×4 ; 12×3

Greater Depth

- 9a. $88 = 1 \times 88$; 2×44 ; 4×22 ; 8×11
 10a. 1×72 ; 2×36 ; 3×24 ; 4×18 ; 6×12 ;
 8×9
 11a. $66 = 1 \times 66$; 2×33 ; 3×22 ; 6×11
 12a.

Factor Pairs of 90 Factor Pairs of 96



Developing

- 1b. 12
 2b. $A = 4$; $B = 8$
 3b. 1×15 ; 3×5
 4b. 1×18 ; 2×9 ; 3×6

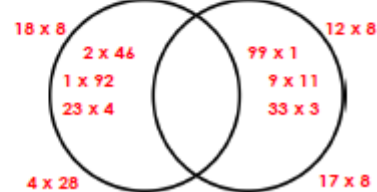
Expected

- 5b. 32
 6b. $A = 3$; $B = 21$; $C = 7$
 7b. 1×28 ; 2×14 ; 4×7
 8b. 1×54 ; 2×27 ; 3×18 ; 6×9

Greater Depth

- 9b. $75 = 1 \times 75$; 3×25 ; 5×15
 10b. 1×84 ; 2×42 ; 3×28 ; 4×21 ; 6×14 ;
 7×12
 11b. $96 = 1 \times 96$; 2×48 ; 3×32 ; 4×24 ;
 6×16 ; 8×12
 12b.

Factor Pairs of 92 Factor Pairs of 99



Extension answers

Expected

- 4a. Various answers, for example: 12, 24, 36, 48.
 5a. Razia is incorrect, some numbers have an odd number of factor pairs. For example, 12, 45 and 44 all have an odd number of factor pairs.

Expected

- 4b. Various answers, for example: 15, 30, 45.
 5b. David is incorrect, some odd numbers have an even number of factor pairs. For example, 39, 49 and 57 all have two factor pairs.