

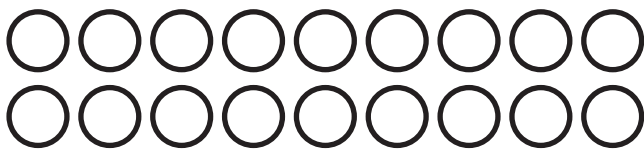
Factor Pairs

To identify factor pairs of a number

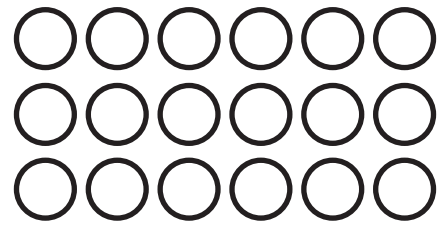
1) Complete the factor pairs for 18.



$$1 \times \square = 18$$



$$\square \times 9 = 18$$

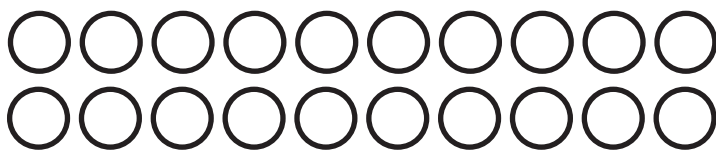


$$\square \times \square = 18$$

2) Complete the factor pairs for 20.



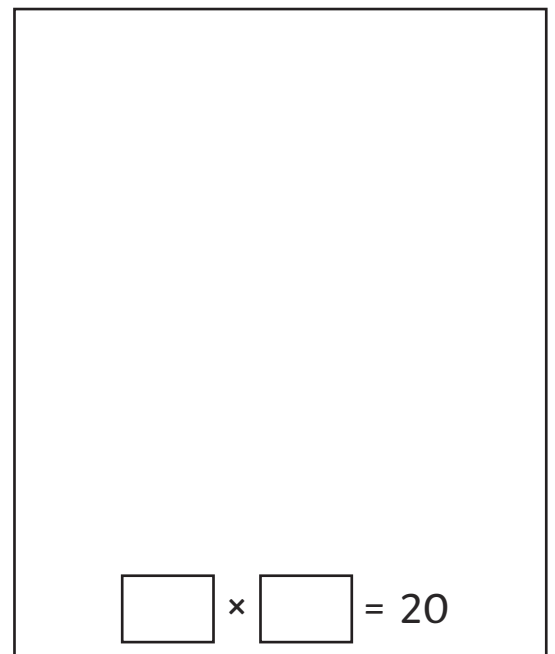
$$\square \times \square = 20$$



$$\square \times \square = 20$$



There is one more way of making 20. Draw an array to find the third factor pair of 20.



Factor Pairs

To identify factor pairs of a number



3) Complete the factor bugs to find all the factor pairs for each number below.

6

1

2

6

8

8

4

8

12

2

3

12

18

9

3

18

22

2

22

24

3

4

24

Factor Pairs

To identify factor pairs of a number



1) Complete the factor bugs to find all the factor pairs for each number below.

10

12

16

18

22

40

Factor Pairs

To identify factor pairs of a number

2) Veronika has been investigating factor pairs of 28.



Factor pairs of 28:

1 and 28

2 and 14



Veronika's findings are incorrect.

Draw a factor bug to show the correct method of finding all the factor pairs of 28.

3) A baker has made 20 cupcakes. He wants to pack them into a box. Which ways can the baker organise the cupcakes so that they fit evenly in the box?

a) Draw arrays to show all of the possible ways.



b) Write your findings as factors of 20.

Factor Pairs

To identify factor pairs of a number



1) Complete the factor bugs to find all the factor pairs for each number below.

24

32

64

77

80

100

Factor Pairs

To identify factor pairs of a number



2) Cemal has been investigating factor pairs.



The larger the number, the greater the amount of factor pairs.

Is Cemal's statement correct? Prove your answer in the box below.

3) Write always, sometimes or never next to the statements in the table.

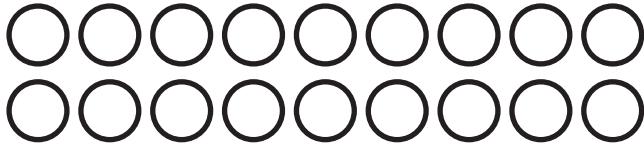
Factors come in pairs	
1 is a factor of every number	
Whole numbers that are odd have 2 as a factor	
Whole numbers have an even number of factors	
Multiples of 10 have 5 and 10 as factors	

Answers

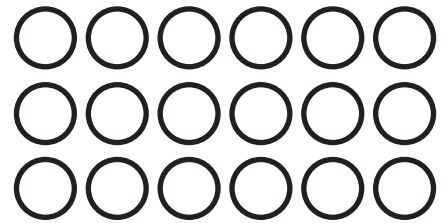
1) Complete the factor pairs for 18.



$$1 \times \boxed{18} = 18$$



$$\boxed{2} \times 9 = 18$$

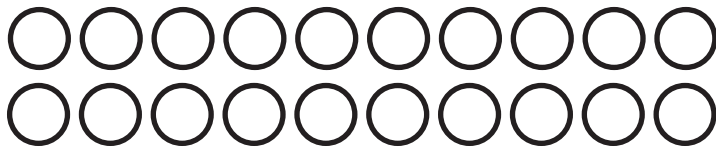


$$\boxed{3} \times \boxed{6} = 18$$

2) Complete the factor pairs for 20.



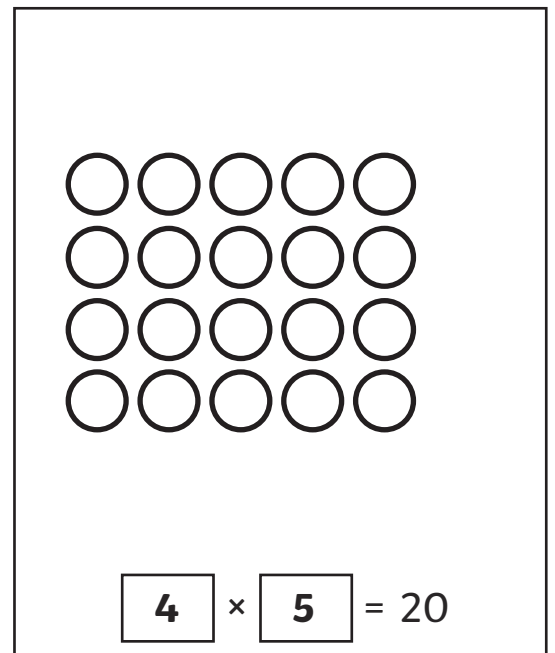
$$\boxed{1} \times \boxed{20} = 20$$



$$\boxed{2} \times \boxed{10} = 20$$



There is one more way of making 20. Draw an array to find the third factor pair of 20.



$$\boxed{4} \times \boxed{5} = 20$$

Answers

3) Complete the factor bugs to find all the factor pairs for each number below.

6

1 6

2 3

6

8

1 8

2 4

8

12

1 12

2 6

3 4

12

18

18 1

2 9

3 6

18

22

1 22

2 11

22

24

1 24

2 12

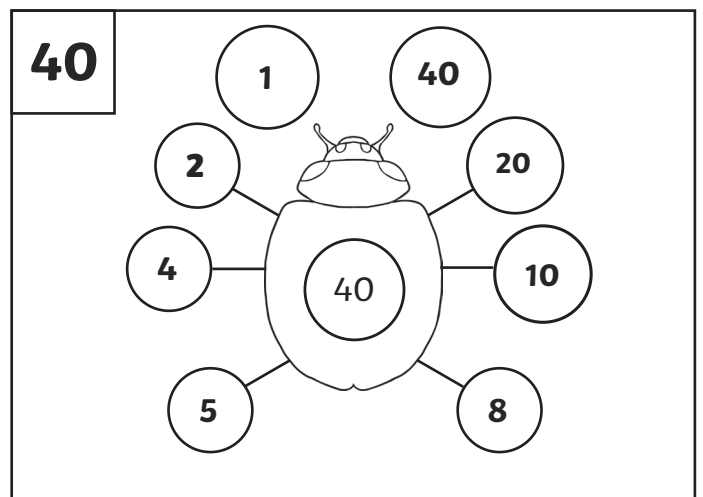
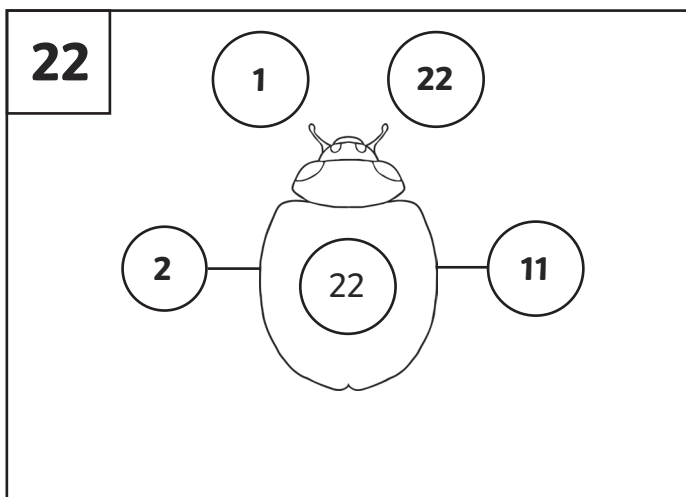
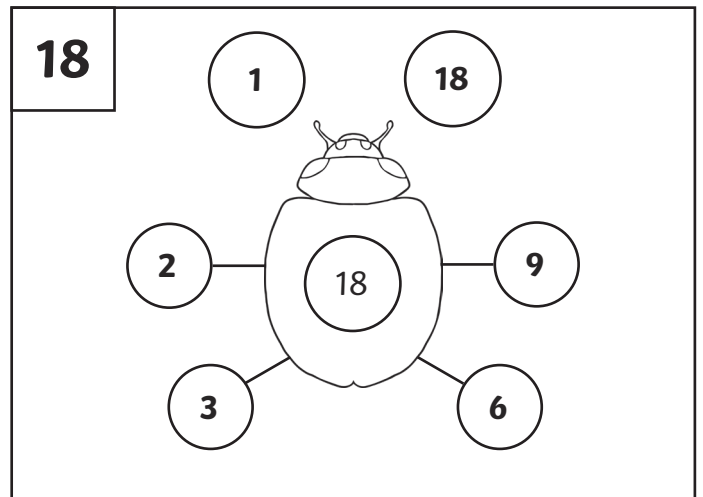
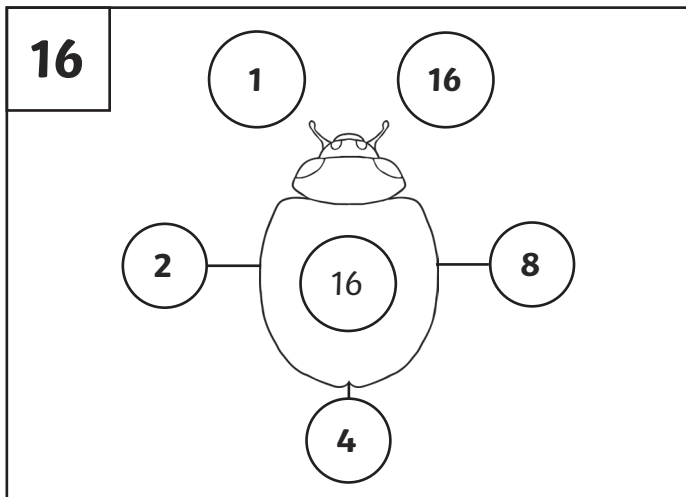
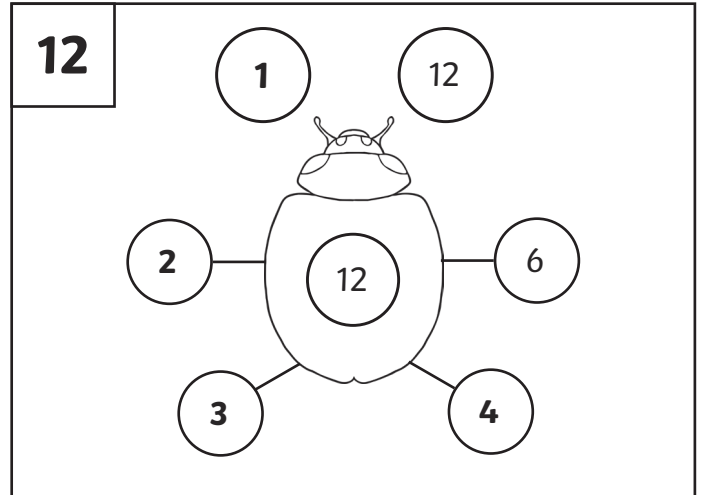
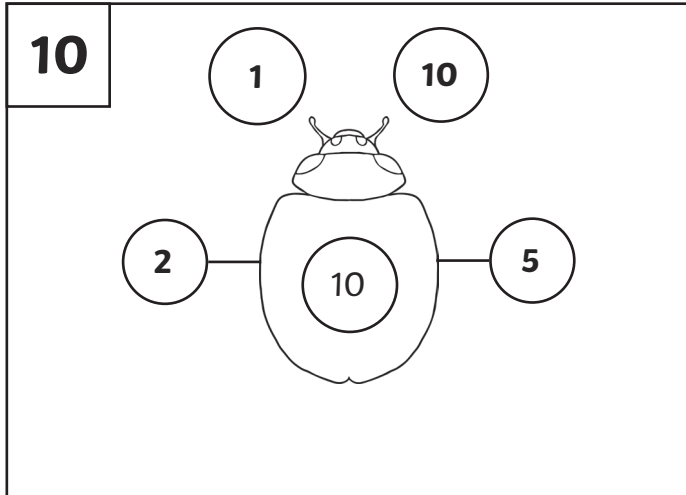
3 8

4 6

24

Answers

1) Complete the factor bugs to find all the factor pairs for each number below.



Answers

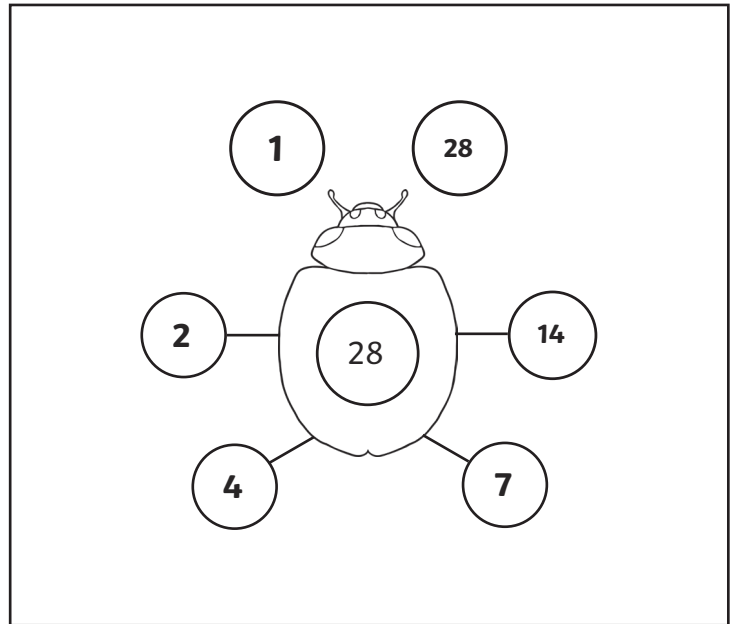
2) Veronika has been investigating factor pairs of 28.



Factor pairs of 28:

1 and 28

2 and 14



Veronika's findings are incorrect.

Draw a factor bug to show the correct method of finding all the factor pairs of 28.

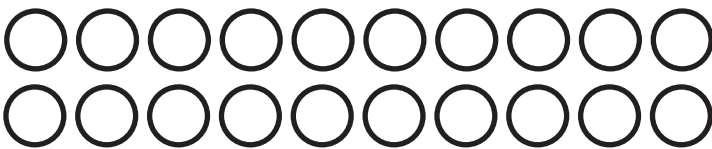
3) A baker has made 20 cupcakes. He wants to pack them into a box. Which ways can the baker organise the cupcakes so that they fit evenly in the box?

a) Draw arrays to show all of the possible ways.



Answers should be arrays which show: 1×20 ,
 2×10 and 4×5 .

E.g.



2×10

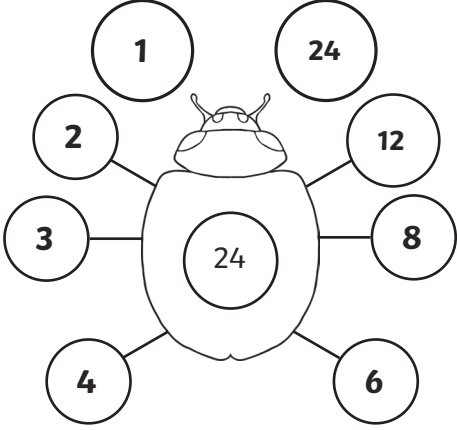
b) Write your findings as factors of 20.

Children may write: 1×20 , 2×10 and 4×5 OR 1, 2, 4, 5, 10, 20

Answers

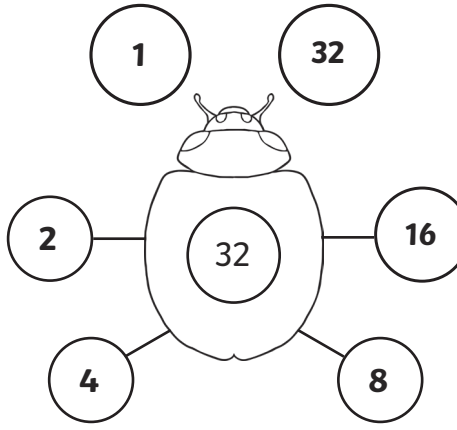
1) Complete the factor bugs to find all the factor pairs for each number below.

24



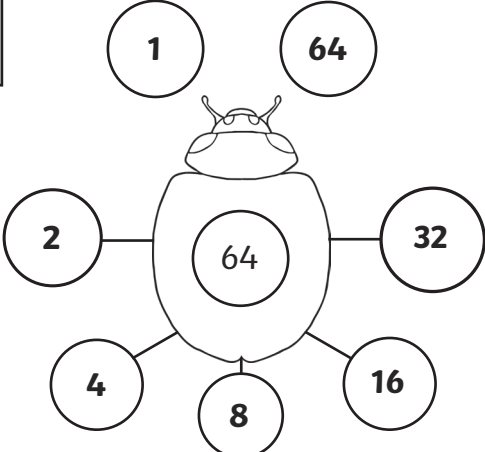
A factor bug for the number 24. The number 24 is written in the center of the bug's body. Eight circles are connected to the bug by lines, each containing a factor of 24: 1, 2, 3, 4, 6, 8, 12, and 24.

32



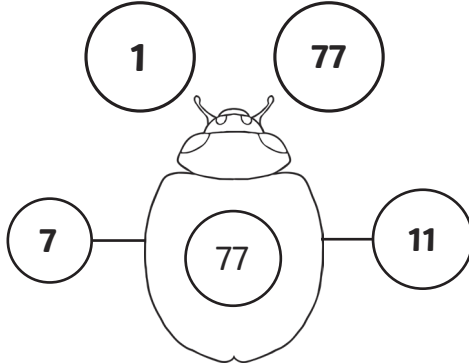
A factor bug for the number 32. The number 32 is written in the center of the bug's body. Five circles are connected to the bug by lines, each containing a factor of 32: 1, 2, 4, 8, and 16.

64



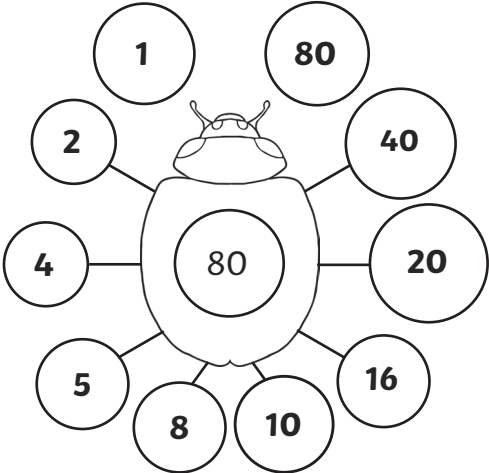
A factor bug for the number 64. The number 64 is written in the center of the bug's body. Six circles are connected to the bug by lines, each containing a factor of 64: 1, 2, 4, 8, 16, and 32.

77



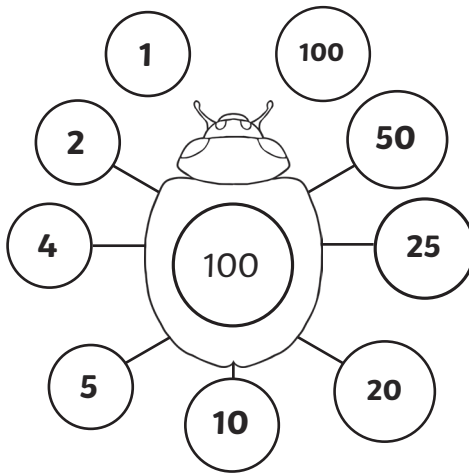
A factor bug for the number 77. The number 77 is written in the center of the bug's body. Three circles are connected to the bug by lines, each containing a factor of 77: 1, 7, and 11.

80



A factor bug for the number 80. The number 80 is written in the center of the bug's body. Ten circles are connected to the bug by lines, each containing a factor of 80: 1, 2, 4, 5, 8, 10, 16, 20, 40, and 80.

100



A factor bug for the number 100. The number 100 is written in the center of the bug's body. Eight circles are connected to the bug by lines, each containing a factor of 100: 1, 2, 4, 5, 10, 20, 25, and 50.

Answers

2) Cemal has been investigating factor pairs.



The larger the number, the greater the amount of factor pairs.

Is Cemal's statement correct? Prove your answer in the box below.

Children prove that Cemal is incorrect by giving examples. They should show a few examples to prove that smaller numbers can sometimes have a greater number of factors when compared to greater numbers.

3) Write always, sometimes or never next to the statements in the table.

Factors come in pairs	sometimes
1 is a factor of every number	always
Whole numbers that are odd have 2 as a factor	never
Whole numbers have an even number of factors	sometimes
Multiples of 10 have 5 and 10 as factors	always