

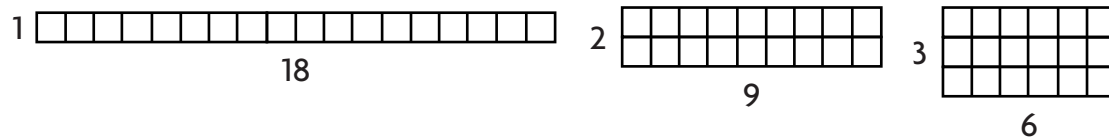
Factors and Multiples

Factors are whole numbers you can multiply to get a specific whole number.

To find factors of 18, think of all the multiplication facts with a product of 18.

$$1 \times 18 = 18 \quad 2 \times 9 = 18 \quad 3 \times 6 = 18$$

You can draw arrays to show the factors of any whole number.



List the factors in order from least to greatest.

Factors of 18: 1, 2, 3, 6, 9, 18.

Multiples of a number are the products of that number and any whole number. To find multiples of a number, multiply the number by the counting numbers 1, 2, 3, and so on.

Multiples of 6: 6, 12, 18, 24, 30

Think: 6×1 , 6×2 , 6×3 , 6×4 , 6×5

Use an array to find the factors of each product.

1. 12 _____

Think: $1 \times 12 = 12$

Think: $2 \times 6 = 12$

Think: $3 \times 4 = 12$

2. 16 _____

Think: $1 \times \underline{\quad} = 16$

Think: $\underline{\quad} \times 8 = 16$

Think: $\underline{\quad} \times 4 = 16$

List the next 2 multiples of each number.

3. 4, 8, 12, _____, _____

4. 7, 14, 21, _____, _____

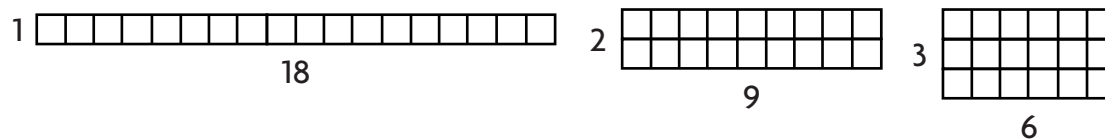
Factors and Multiples

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You can draw arrays to show the factors of any whole number.



List the factors in order from least to greatest.

Factors of 18: 1, 2, 3, 6, 9, 18.

Multiples of a number are the products of that number and any whole number. To find multiples of a number, multiply the number by the counting numbers 1, 2, 3, and so on.

Multiples of 6: 6, 12, 18, 24, 30

Think: 6×1 , 6×2 , 6×3 , 6×4 , 6×5

Use an array to find the factors of each product.

1. 12 _____ **1, 2, 3, 4, 6, 12**

Think: $1 \times 12 = 12$ Think: $2 \times 6 = 12$ Think: $3 \times 4 = 12$

Check students' drawings.

2. 16 _____ **1, 2, 4, 8, 16**

Think: $1 \times \underline{16} = 16$ Think: $\underline{2} \times 8 = 16$ Think: $\underline{4} \times 4 = 16$

Check students' drawings.

List the next 2 multiples of each number.

3. 4, 8, 12, **16**, **20**

4. 7, 14, 21, **28**, **35**

Factors and Multiples

Use arrays to find the factors of each number.

1. 12

2. 28

3. 45

4. 32

5. 54

6. 33

Find the first 6 multiples of each number.

7. 3 _____

8. 6 _____

9. 7 _____

10. 8 _____

11. 9 _____

12. 11 _____

Find the missing multiple.

13. 24, 32, _____, 48

14. _____, 42, 48, 54

15. 12, _____, 16, 18

Mixed Review

16.
$$\begin{array}{r} 16 \\ \times 7 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 12 \\ \times 6 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 18 \\ \times 6 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 24 \\ \times 4 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 11 \\ \times 11 \\ \hline \end{array}$$

21. $264 \div 2 = \underline{\hspace{2cm}}$

22. $105 \div 5 = \underline{\hspace{2cm}}$

23. $144 \div 9 = \underline{\hspace{2cm}}$

24.
$$\begin{array}{r} \$2.16 \\ \times 3 \\ \hline \end{array}$$

25.
$$\begin{array}{r} \$8.45 \\ \times 2 \\ \hline \end{array}$$

26.
$$\begin{array}{r} \$3.50 \\ \times 3 \\ \hline \end{array}$$

27.
$$\begin{array}{r} \$2.25 \\ \times 4 \\ \hline \end{array}$$

28.
$$\begin{array}{r} \$1.12 \\ \times 6 \\ \hline \end{array}$$

Factors and Multiples

Use arrays to find the factors of each number.

1. 12

1, 2, 3, 4, 6, 12

2. 28

1, 2, 4, 7, 14, 28

3. 45

1, 3, 5, 9, 15, 45

4. 32

1, 2, 4, 8, 16, 32

5. 54

1, 2, 3, 6, 9, 18, 27, 54

6. 33

1, 3, 11, 33

Find the first 6 multiples of each number.

7. 3 3, 6, 9, 12, 15, 188. 6 6, 12, 18, 24, 30, 369. 7 7, 14, 21, 28, 35, 4210. 8 8, 16, 24, 32, 40, 4811. 9 9, 18, 27, 36, 45, 5412. 11 11, 22, 33, 44, 55, 66

Find the missing multiple.

13. 24, 32, 40, 4814. 36, 42, 48, 5415. 12, 14, 16, 18

Mixed Review

$$\begin{array}{r} 16. \quad 16 \\ \times 7 \\ \hline 112 \end{array}$$

$$\begin{array}{r} 17. \quad 12 \\ \times 6 \\ \hline 72 \end{array}$$

$$\begin{array}{r} 18. \quad 18 \\ \times 6 \\ \hline 108 \end{array}$$

$$\begin{array}{r} 19. \quad 24 \\ \times 4 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 20. \quad 11 \\ \times 11 \\ \hline 121 \end{array}$$

21. $264 \div 2 = \underline{132}$

22. $105 \div 5 = \underline{21}$

23. $144 \div 9 = \underline{16}$

$$\begin{array}{r} 24. \quad \$2.16 \\ \times 3 \\ \hline \$6.48 \end{array}$$

$$\begin{array}{r} 25. \quad \$8.45 \\ \times 2 \\ \hline \$16.90 \end{array}$$

$$\begin{array}{r} 26. \quad \$3.50 \\ \times 3 \\ \hline \$10.50 \end{array}$$

$$\begin{array}{r} 27. \quad \$2.25 \\ \times 4 \\ \hline \$9.00 \end{array}$$

$$\begin{array}{r} 28. \quad \$1.12 \\ \times 6 \\ \hline \$6.72 \end{array}$$