

Year 4: Factor pairs and multiplying three numbers: answers

Year 4 - Times Tables - Lesson 3.6

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/ks2-sats/maths/year-4/ch03-times-tables/factor-pairs-and-multiplying-three-numbers/

Exercise 3F Factor pairs and multiplying three numbers Non-calculator

1 Find all the factor pairs of each number.

(a) 8

Answer: 1 and 8, 2 and 4

(b) 15

Answer: 1 and 15, 3 and 5

(c) 20

Answer: 1 and 20, 2 and 10, 4 and 5

(d) 28

Answer: 1 and 28, 2 and 14, 4 and 7

2 List all the factors of each number, in order.

(a) 10

Answer: 1, 2, 5, 10

(b) 16

Answer: 1, 2, 4, 8, 16

(c) 18

Answer: 1, 2, 3, 6, 9, 18

(d) 21

Answer: 1, 3, 7, 21

3 Is the first number a factor of the second number? Write Yes or No.

(a) Is 6 a factor of 24?

Answer: Yes

(b) Is 5 a factor of 36?

Answer: No

(c) Is 8 a factor of 56?

Answer: Yes

(d) Is 9 a factor of 72?

Answer: Yes

(e) Is 7 a factor of 50?

Answer: No

(f) Is 12 a factor of 96?

Answer: Yes

4 Square numbers have a factor pair with the same number twice. Find all the factors of each square number.

(a) 36

Answer: 1, 2, 3, 4, 6, 9, 12, 18, 36

(b) 49

Answer: 1, 7, 49

(c) 25

Answer: 1, 5, 25

5 Multiply the three numbers. Look for an easy pair to multiply first.

(a) $2 \times 5 \times 7$

Answer: 70

(b) $4 \times 3 \times 5$

Answer: 60

(c) $2 \times 3 \times 4$

Answer: 24

(d) $5 \times 2 \times 9$

Answer: 90

(e) $6 \times 3 \times 2$

Answer: 36

(f) $2 \times 5 \times 8$

Answer: 80

(g) $3 \times 3 \times 4$

Answer: 36

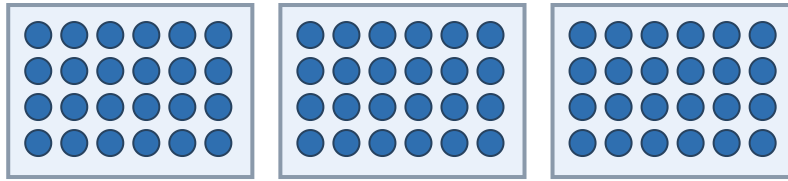
(h) $4 \times 5 \times 5$

Answer: 100

6 Factor pairs of 24. Mr Ali has 24 chairs. He puts them in equal rows. Write all the ways he could arrange them in rows with the same number in each row.

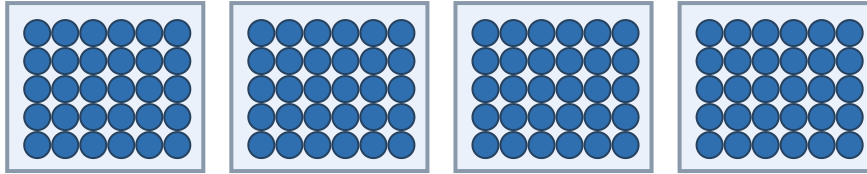
Answer: 1 and 24, 2 and 12, 3 and 8, 4 and 6 (each can also be turned the other way)

7 A baker makes 3 trays of buns. Each tray has 4 rows with 6 buns in each row. How many buns is that altogether?



Answer: 72

- 8** A shop has 4 crates. Each crate has 5 rows of 6 bottles. How many bottles are there altogether?



Answer: 120

- 9** Amira says, "Every number has exactly two factors: 1 and the number itself." Is Amira right? Give an example to explain.

Answer: No. 12 has six factors.

- 10** One of these numbers is **not** a factor of 24. Which one? 1 2 3 4 6 8 9 12

Answer: 9

- 11** Always, sometimes or never?

(a) 1 is a factor of every number.

Answer: Always

(b) A factor of 12 is also a factor of 24.

Answer: Always

(c) A factor of a number is smaller than the number.

Answer: Sometimes

- 12** Zoe says, "30 has more factors than 24 because 30 is bigger." Is Zoe right?

Answer: No. They both have 8 factors.

- 13** Some numbers have exactly three factors. 9 is one: its factors are 1, 3 and 9. Find all the numbers up to 50 that have exactly three factors. (Hint: they are all square numbers.)

Answer: 4, 9, 25 and 49

- 14** Choose three **different** numbers from 2, 3, 4 and 5. Multiply them together. Which three numbers make 60?

Answer: 3, 4 and 5