

Y6 Factors Multiples Primes

KS2 Y6 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Find the common factors of 24 and 36. Which is the highest?

Step 1 · Factors of 24 (in pairs)

1, 2, 3, 4, 6, 8, 12, 24

Step 2 · Factors of 36 (in pairs)

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

Step 3 · In both lists

1, 2, 3, 4, 6, 12

Answer: Common factors 1, 2, 3, 4, 6, 12; the highest common factor is 12

Check: $24 \div 12 = 2$ and $36 \div 12 = 3$ ✓

2. Now try one with the steps

Find the common multiples of 6 and 8 up to 50.

Step 1 · Multiples of 6

Step 2 · Multiples of 8

Step 3 · In both lists

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. List all the factors of 30.

2. List the common factors of 18 and 27.

3. What is the highest common factor of 32 and 48?

4. Write the first three common multiples of 4 and 6.

5. What is the lowest common multiple of 9 and 12?

6. List the prime numbers between 40 and 60.

7. Is 87 prime? Explain.

8. Write 60 product of prime numbers.

9. Which number less than 50 is a multiple of both 7 and 4?

10. Two prime numbers add up to 30. Give two possible pairs.

11. One light flashes every 8 seconds and another every 10 seconds. They flash together now. After how many seconds will they next flash together?

12. 24 lemon sweets and 40 mint sweets are shared into identical bags with none left over. What is the greatest number of bags?

13. Use the highest common factor to simplify $\frac{36}{48}$.

14. Explain why 1 is not a prime number.

15. I am a common multiple of 3 and 5. I am between 50 and 70 and I am even. What number am I?

4. Before you hand it in

Mixing up factors and multiples: saying 24 is a factor of 6.

Factors fit into a number (6 is a factor of 24). Multiples are in its times table (24 is a multiple of 6).

Saying all odd numbers are prime, such as 9, 15, 21 or 91.

Test small primes: 3, 5, 7. $9 = 3 \times 3$, $15 = 3 \times 5$, $21 = 3 \times 7$ and $91 = 7 \times 13$.

Thinking the lowest common multiple is always the two numbers multiplied.

List the multiples: 6 and 8 share 24 first.