TARGET To identify common factors and prime numbers.

Examples

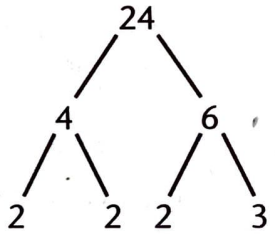
Factors of 16 1, 2, 4, 8, 16
Factors of 40 1, 2, 4, 5, 8, 10, 20, 40

Common factors 1, 2, 4, 8

Highest common factor 8

Prime numbers – 2 factors only e.g. 23
Composite numbers – more than 2 factors e.g. 24

Prime factors can be found by using a factor tree.
Prime factors of 24: $2 \times 2 \times 2 \times 3$



A

Find all the factors of each number. The number of factors is shown in brackets.

1. 12 (6)
2. 28 (6)
3. 25 (3)
4. 30 (8)
5. 32 (6)
6. 27 (4)
7. 55 (4)
8. 18 (6)
9. 100 (9)
10. 54 (8)
11. 49 (3)
12. 60 (12)

Write down the number(s) in each group which are not prime numbers.

B

For each pair of numbers find:

a) the common factors
b) the highest common factor.

1. 6, 15
2. 16, 24
3. 45, 60
4. 12, 18
5. 8, 12
6. 27, 36
7. 36, 96
8. 40, 100
9. 28, 70
10. 32, 72
11. 18, 30
12. 24, 60

13. List all the prime

C

For each group of numbers find:

a) the common factors
b) the highest common factor.

1. 20, 32, 60
2. 225, 450, 600
3. 32, 64, 80
4. 9, 27, 33
5. 56, 96, 120
6. 36, 54, 108
7. 30, 48, 84
8. 45, 72, 135