



Name: _____

Date: _____

1. Is 19 prime or composite?

Prime

Composite

2. How many factors does 23 have?

3. Is 3 a factor of 33?

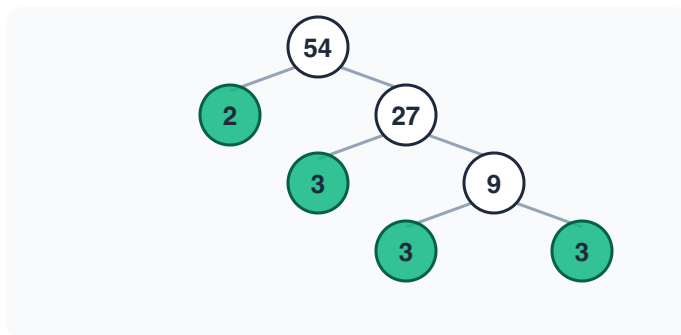
Yes

No

4. What is the smallest factor of 35 that is greater than 1? ____



5. The factor tree breaks 54 into primes. What is its prime factorization?



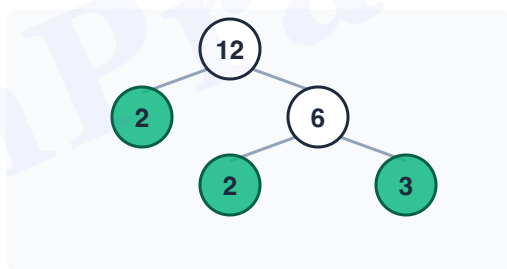
$2 \times 3 \times 3 \times 3$

$2 \times 2 \times 3 \times 3$

$6 \times 3 \times 3$

$2 \times 3 \times 3$

6. How many prime factors (counting repeats) does 12 have, as the tree shows?



7. Is 37 prime or composite?

Prime

Composite

8. How many factors does 27 have?



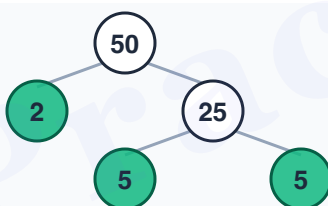
9. Is 5 a factor of 24?

No

Yes

10. What is the smallest factor of 9 that is greater than 1? ____

11. The factor tree breaks 50 into primes. What is its prime factorization?



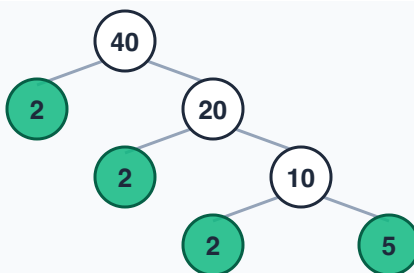
2×5

$2 \times 5 \times 5$

10×5

$2 \times 5 \times 6$

12. How many prime factors (counting repeats) does 40 have, as the tree shows?





13. Is 41 prime or composite?

Composite

Prime

14. How many factors does 31 have?

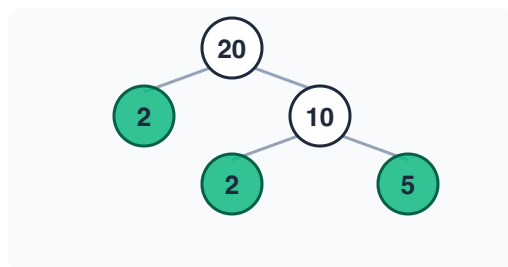
15. Is 3 a factor of 40?

No

Yes

16. What is the smallest factor of 21 that is greater than 1? ____

17. The factor tree breaks 20 into primes. What is its prime factorization?



$2 \times 2 \times 2$

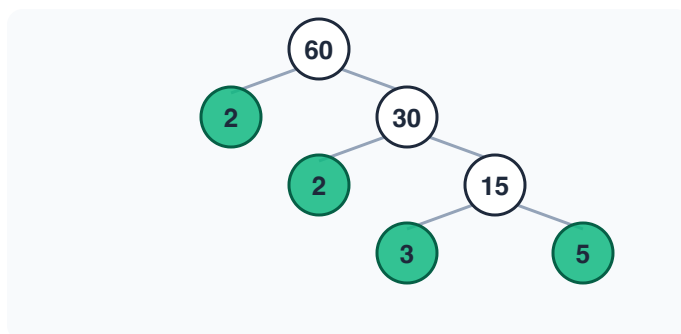
$2 \times 2 \times 5$

$2 \times 2 \times 6$

$2 \times 5 \times 4$



18. How many prime factors (counting repeats) does 60 have, as the tree shows?





Answer Key

1. **Prime** 19 is prime (only factors 1 and itself).
2. **2** 23 has these factors: 1, 23 - that is 2.
3. **Yes** $33 \div 3 = 11$ with no remainder, so 3 is a factor.
4. **5** 5 divides 35 evenly ($35 \div 5 = 7$), and nothing smaller than 5 (except 1) does.
5. **$2 \times 3 \times 3 \times 3$** Multiplying the leaves: $2 \times 3 \times 3 \times 3 = 54$.
6. **3** $12 = 2 \times 2 \times 3$ - that is 3 prime factors.
7. **Prime** 37 is prime (only factors 1 and itself).
8. **4** 27 has these factors: 1, 3, 9, 27 - that is 4.
9. **No** $24 \div 5$ does not divide evenly, so 5 is not a factor.
10. **3** 3 divides 9 evenly ($9 \div 3 = 3$), and nothing smaller than 3 (except 1) does.
11. **$2 \times 5 \times 5$** Multiplying the leaves: $2 \times 5 \times 5 = 50$.
12. **4** $40 = 2 \times 2 \times 2 \times 5$ - that is 4 prime factors.
13. **Prime** 41 is prime (only factors 1 and itself).
14. **2** 31 has these factors: 1, 31 - that is 2.
15. **No** $40 \div 3$ does not divide evenly, so 3 is not a factor.
16. **3** 3 divides 21 evenly ($21 \div 3 = 7$), and nothing smaller than 3 (except 1) does.
17. **$2 \times 2 \times 5$** Multiplying the leaves: $2 \times 2 \times 5 = 20$.
18. **4** $60 = 2 \times 2 \times 3 \times 5$ - that is 4 prime factors.