



Name: _____

Date: _____

1. Is 5 prime or composite?

Prime

Composite

2. How many factors does 13 have?

3. Is 8 a factor of 46?

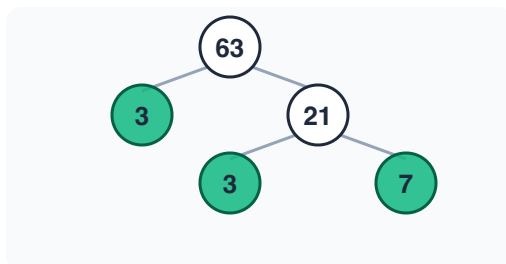
Yes

No

4. What is the smallest factor of 12 that is greater than 1? ____



5. The factor tree breaks 63 into primes. What is its prime factorization?



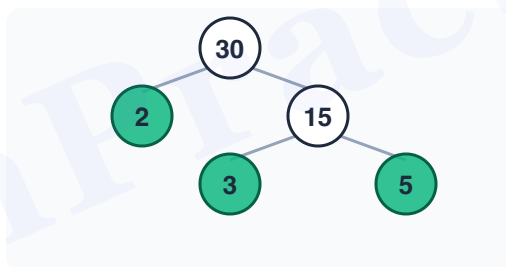
$3 \times 3 \times 8$

$3 \times 3 \times 7$

$3 \times 7 \times 5$

3×3

6. How many prime factors (counting repeats) does 30 have, as the tree shows?



7. Is 3 prime or composite?

Prime

Composite

8. How many factors does 20 have?

5

7

6

4



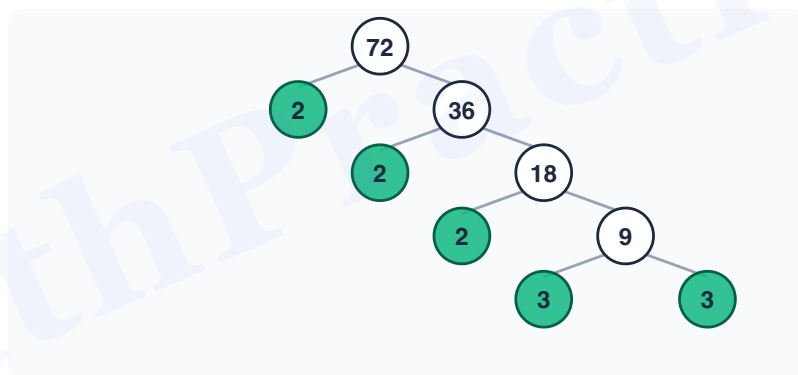
9. Is 2 a factor of 11?

No

Yes

10. What is the smallest factor of 33 that is greater than 1? ____

11. The factor tree breaks 72 into primes. What is its prime factorization?



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

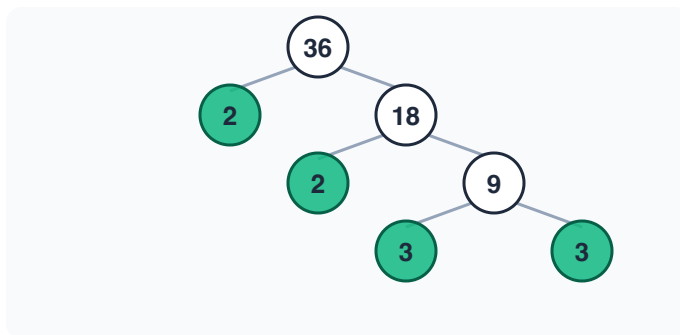
$2 \times 2 \times 2 \times 2 \times 3$

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

$4 \times 2 \times 3 \times 3$



12. How many prime factors (counting repeats) does 36 have, as the tree shows?



13. Is 20 prime or composite?

Composite

Prime

14. How many factors does 50 have?

15. Is 3 a factor of 8?

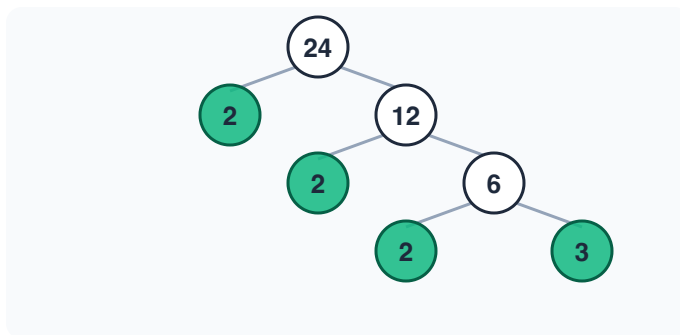
Yes

No

16. What is the smallest factor of 14 that is greater than 1? ____



17. The factor tree breaks 24 into primes. What is its prime factorization?



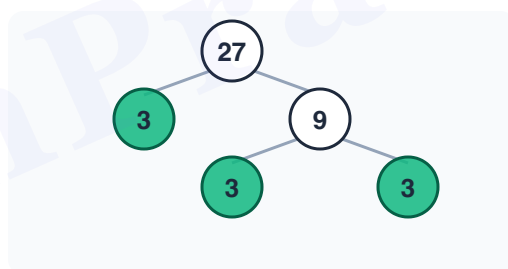
$4 \times 2 \times 3$

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

$2 \times 2 \times 3 \times 4$

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

18. How many prime factors (counting repeats) does 27 have, as the tree shows?





Answer Key

1. **Prime** 5 is prime (only factors 1 and itself).
2. **2** 13 has these factors: 1, 13 - that is 2.
3. **No** $46 \div 8$ does not divide evenly, so 8 is not a factor.
4. **2** 2 divides 12 evenly ($12 \div 2 = 6$), and nothing smaller than 2 (except 1) does.
5. **$3 \times 3 \times 7$** Multiplying the leaves: $3 \times 3 \times 7 = 63$.
6. **3** $30 = 2 \times 3 \times 5$ - that is 3 prime factors.
7. **Prime** 3 is prime (only factors 1 and itself).
8. **6** 20 has these factors: 1, 2, 4, 5, 10, 20 - that is 6.
9. **No** $11 \div 2$ does not divide evenly, so 2 is not a factor.
10. **3** 3 divides 33 evenly ($33 \div 3 = 11$), and nothing smaller than 3 (except 1) does.
11. **$2 \times 2 \times 2 \times 3 \times 3$** Multiplying the leaves: $2 \times 2 \times 2 \times 3 \times 3 = 72$.
12. **4** $36 = 2 \times 2 \times 3 \times 3$ - that is 4 prime factors.
13. **Composite** 20 is composite (has more than two factors).
14. **6** 50 has these factors: 1, 2, 5, 10, 25, 50 - that is 6.
15. **No** $8 \div 3$ does not divide evenly, so 3 is not a factor.
16. **2** 2 divides 14 evenly ($14 \div 2 = 7$), and nothing smaller than 2 (except 1) does.
17. **$2 \times 2 \times 2 \times 3$** Multiplying the leaves: $2 \times 2 \times 2 \times 3 = 24$.
18. **3** $27 = 3 \times 3 \times 3$ - that is 3 prime factors.