Principles of Algebra

Name/Date Clee / Today

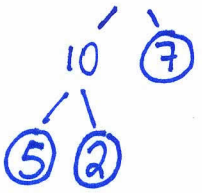
ALL WORK CAN BE DONE ON THIS SHEET

Your factor trees will probably look differently than mine, but our answers should be the same.

WS 12A.1 – Prime Factorization

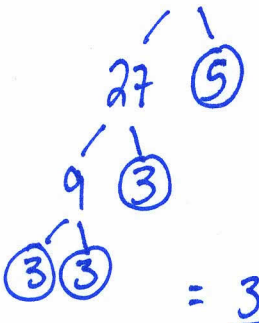
Find the prime factorization of each number.

1. 70



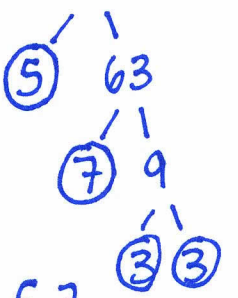
$= 2 \cdot 5 \cdot 7$

2. 135



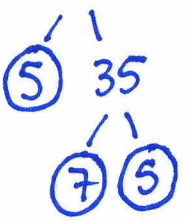
$= 3^3 \cdot 5$

3. 315



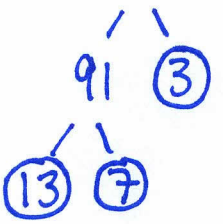
$= 3^2 \cdot 5 \cdot 7$

4. 165



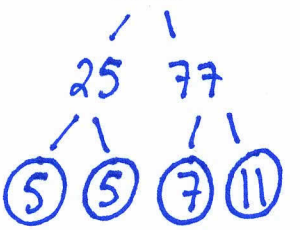
$= 5^2 \cdot 7$

5. 273



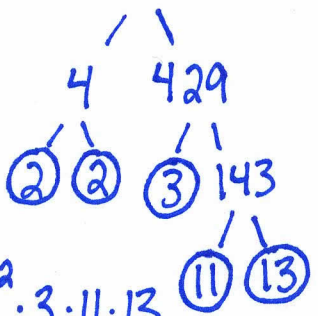
$= 3 \cdot 7 \cdot 13$

6. 1925



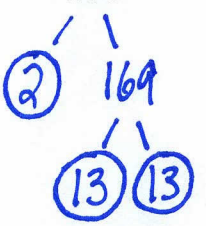
$= 5^2 \cdot 7 \cdot 11$

7. 1716



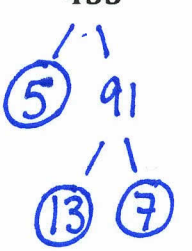
$= 2^2 \cdot 3 \cdot 11 \cdot 13$

8. 338



$= 2 \cdot 13^2$

9. 455



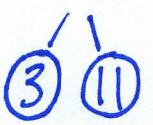
$= 5 \cdot 7 \cdot 13$

10. 149

prime

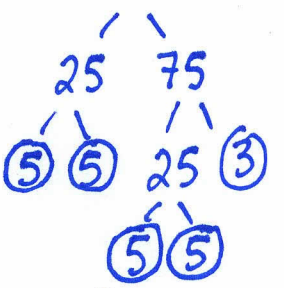
only need to check prime numbers up to $\sqrt{149} \approx 12.2$ $(2, 3, 5, 7, 11)$

11. 33



$= 3 \cdot 11$

12. 1875



$= 3 \cdot 5^4$