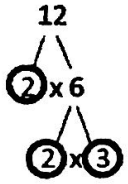
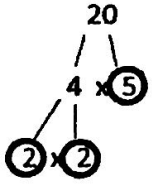
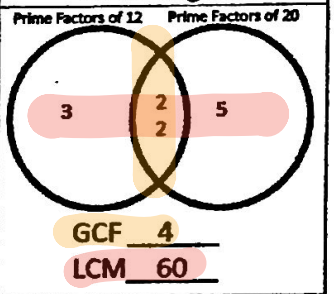
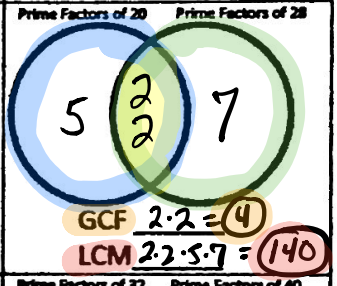
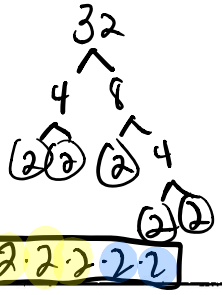
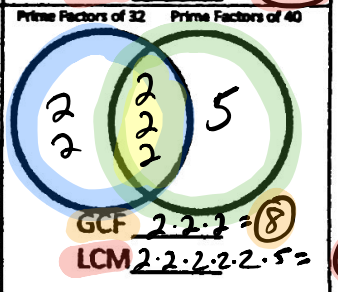
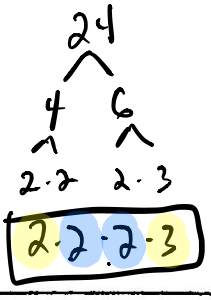
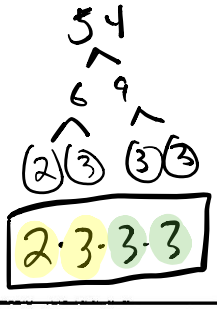
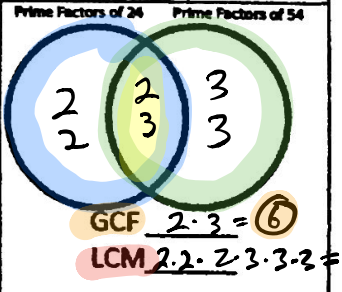
Name Stew Dent Date Per. A

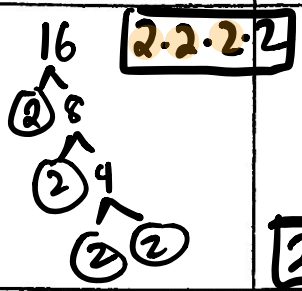
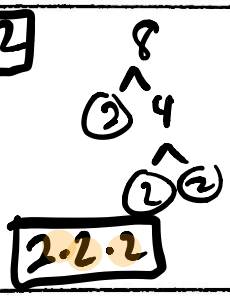
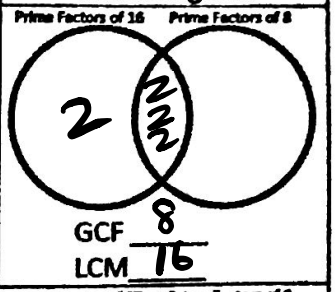
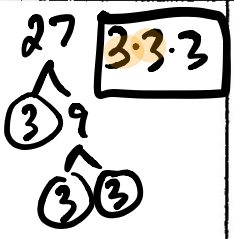
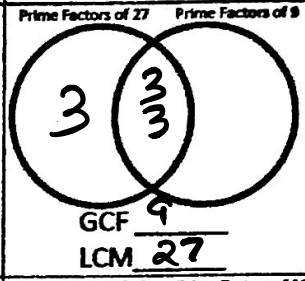
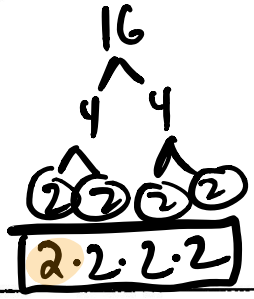
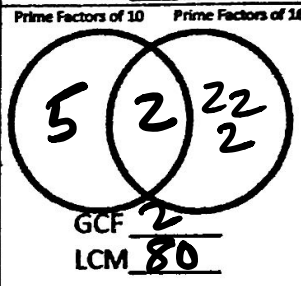
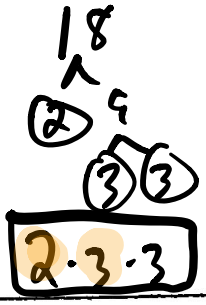
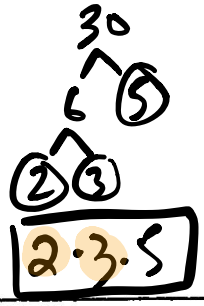
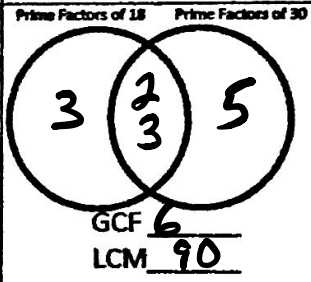
Factor Trees, GCF, and LCM

***Directions:** Find the prime factors of each number, and then fill in the Venn diagram to compare and contrast the prime factors of both numbers. Finally, write the Greatest Common Factor (GCF) of the numbers by multiplying the common prime factors and the Least Common Multiple (LCM) by multiplying all the prime factors in the Venn diagram.*

Numbers	Factor Trees	Factor Trees	Venn Diagram
Example: 12 and 20	 12 → 2 × 6 → 2 × 3	 20 → 4 × 5 → 2 × 2	 Prime Factors of 12: 3, 2, 2 Prime Factors of 20: 2, 2, 5 GCF 4 LCM 60
20 and 28	 20 → 2 × 10 → 5 × 2	 28 → 7 × 4 → 2 × 2	 Prime Factors of 20: 5, 2, 2 Prime Factors of 28: 2, 2, 7 GCF 2·2 = 4 LCM 2·2·5·7 = 140
32 and 40	 32 → 4 × 8 → 2 × 2 × 2 × 2 × 2	 40 → 4 × 10 → 2 × 2 × 2 × 5	 Prime Factors of 32: 2, 2, 2, 2, 2 Prime Factors of 40: 2, 2, 2, 5 GCF 2·2·2 = 8 LCM 2·2·2·2·2·5 = 160
24 and 54	 24 → 4 × 6 → 2·2 × 2·3 → 2·2·2·3	 54 → 6 × 9 → 2 × 3 × 3 × 3 → 2·3·3·3	 Prime Factors of 24: 2, 2, 2, 3 Prime Factors of 54: 2, 3, 3, 3 GCF 2·3 = 6 LCM 2·2·2·3·3·3 = 216

GCF: Multiply Common Prime Factors Only

LCM: Multiply ALL Prime Factors in Venn Diagram

Numbers	Factor Trees	Factor Trees	Venn Diagram
16 and 8			
27 and 9			
10 and 16			
18 and 30			
15 and 25