Number Theory - Shortcuts

1. **What is the sum of all prime numbers less than 10?**
   - o   A) 17
   - o   B) 18
   - o   C) 19
   - o   D) 20

   Answer: A) 17

2. **Which of the following is a perfect square?**
   - o   A) 18
   - o   B) 21
   - o   C) 25
   - o   D) 30

   Answer: C) 25

3. **What is the greatest common divisor of 48 and 60?**
   - o   A) 12
   - o   B) 15
   - o   C) 20
   - o   D) 24

   Answer: D) 12

4. **If a number is divisible by 9, then the sum of its digits must be:**
   - o   A) Divisible by 3
   - o   B) Divisible by 6
   - o   C) Divisible by 9
   - o   D) Even

   Answer: C) Divisible by 9

5. **Which number is both a multiple of 4 and a multiple of 6?**
   - o   A) 24
   - o   B) 20
   - o   C) 18
   - o   D) 28

   Answer: A) 24

Divisibility Rules

1. **Which of the following numbers is divisible by 8?**
   - A) 1232
   - B) 4521
   - C) 6398
   - D) 5279

   Answer: A) 1232

2. **A number is divisible by 11 if the difference between the sum of the digits in odd positions and the sum of the digits in even positions is:**
   - A) 0
   - B) 1
   - C) 2
   - D) 3

   Answer: A) 0

3. **Which of the following numbers is not divisible by 7?**
   - A) 154
   - B) 273
   - C) 385
   - D) 462

   Answer: B) 273

4. **Which of the following is divisible by 5?**
   - A) 234
   - B) 678
   - C) 1125
   - D) 1432

   Answer: C) 1125

5. **If a number is divisible by both 3 and 4, it must also be divisible by:**
   - A) 6
   - B) 12
   - C) 9
   - D) 18

   Answer: B) 12