

Divisibility rules

If a number is divisible by

2: The last digit is 0, 2, 4, 6, and 8

$$\frac{346}{2} = 173$$

$$\frac{245}{2} = 122.5$$

3: The sum of all digits is divisible by 3

$$\frac{3+4+6}{3} = 13 \times$$

$$\frac{3462}{3} = 1154$$

4: The last two digits are 00 or are divisible by 4

$$\frac{1300}{4} = 325 \quad \frac{346}{4} \times \quad \frac{325}{5} = 65$$

5: The last digit is either 5 or 0

$$\frac{3465}{5} \times \quad \frac{3462}{6} \times \quad \frac{346}{6} =$$

6: The number is divisible by BOTH 2 and 3

7: The difference between twice the last digit and the remaining number is divisible by 7

$$\frac{336}{2} = 12 \quad \frac{33}{21} \times$$

8: The last three digits are 000 or are divisible by 8

$$\frac{17000}{8} = 2125$$

9: The sum of all digits is divisible by 9

$$\frac{2+1+2+5}{9} = 10 \times$$

10: The last digit is 0

$$\frac{3467}{10} \times$$

$$\frac{3816}{9} \times$$

$$\frac{2124}{9} \times$$

$$\frac{3460}{9} \times$$

11: The difference between the sums of alternate digits is 0 or a multiple of 11

$$\frac{34672}{11} =$$

$$\frac{3467}{11} \times$$

12: The number is divisible by BOTH 3 and 4

$$\frac{34672}{12} =$$

$$\frac{34572}{12} = \frac{3152}{12} =$$