

Divisibility & Remainders

Advanced — ANSWER KEY

Bigger numbers, combined checks.

Think: Divisible by 6 means divisible by BOTH 2 and 3. Check each on its own.

1. Answers with the thinking.

1) What is the smallest number GREATER than 300 that is divisible by 3? **303**

↳ $303 = 3 \times 101$

3) Is 227 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: no; by 3: no

5) What is the smallest number GREATER than 171 that is divisible by 5? **175**

↳ $175 = 5 \times 35$

7) What is the smallest number GREATER than 257 that is divisible by 7? **259**

↳ $259 = 7 \times 37$

9) Is 178 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: yes; by 3: no

11) What is the smallest number GREATER than 197 that is divisible by 8? **200**

↳ $200 = 8 \times 25$

2) What is the remainder of $349 \div 9$? **7**

↳ $9 \times 38 = 342$

4) What is the smallest number GREATER than 116 that is divisible by 4? **120**

↳ $120 = 4 \times 30$

6) What is the remainder of $397 \div 7$? **5**

↳ $7 \times 56 = 392$

8) What is the smallest number GREATER than 58 that is divisible by 8? **64**

↳ $64 = 8 \times 8$

10) What is the smallest number GREATER than 148 that is divisible by 5? **150**

↳ $150 = 5 \times 30$

12) What is the remainder of $186 \div 7$? **4**

↳ $7 \times 26 = 182$