

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 remainder of $214 \div 7$? **4**

↳ $7 \times 30 = 210$

- 3) Is 252 divisible by 6? (It must be divisible by BOTH 2 and 3.) **yes**

↳ by 2: yes; by 3: yes

- 5) Is 208 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: yes; by 3: no

- 7) What is the smallest number GREATER than 177 that is divisible by 9? **180**

↳ $180 = 9 \times 20$

- 9) What is the remainder of $210 \div 6$? **0**

↳ $6 \times 35 = 210$

- 11) Is 242 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: yes; by 3: no

- 2) What is the smallest number GREATER than 392 that is divisible by 7? **399**

↳ $399 = 7 \times 57$

- 4) What is the smallest number GREATER than 389 that is divisible by 6? **390**

↳ $390 = 6 \times 65$

- 6) Is 71 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: no; by 3: no

- 8) Is 243 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: no; by 3: yes

- 10) Is 158 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: yes; by 3: no

- 12) Is 209 divisible by 6? (It must be divisible by BOTH 2 and 3.) **no**

↳ by 2: no; by 3: no