

Divisibility & Remainders

Practice — ANSWER KEY

Digit-sum tricks and sharing problems.

Think: For 3 and 9: add up the digits. If the digit sum divides, the number divides.

1. Answers with the thinking.

- 1) Is 97 divisible by 3? Use the digit-sum trick. **no**

↳ digits add to 16; 16 is not divisible by 3

- 3) 22 marbles are shared equally among 6 friends. How many marbles are LEFT OVER? **4**

↳ each friend gets 3

- 5) What is the remainder of $78 \div 6$? **0**

↳ $6 \times 13 = 78$

- 7) What is the remainder of $44 \div 6$? **2**

↳ $6 \times 7 = 42$

- 9) What is the remainder of $85 \div 5$? **0**

↳ $5 \times 17 = 85$

- 11) What is the remainder of $70 \div 4$? **2**

↳ $4 \times 17 = 68$

- 2) What is the remainder of $87 \div 5$? **2**

↳ $5 \times 17 = 85$

- 4) What is the remainder of $80 \div 6$? **2**

↳ $6 \times 13 = 78$

- 6) What is the remainder of $55 \div 5$? **0**

↳ $5 \times 11 = 55$

- 8) Is 159 divisible by 9? Use the digit-sum trick. **no**

↳ digits add to 15; 15 is not divisible by 9

- 10) 57 marbles are shared equally among 4 friends. How many marbles are LEFT OVER? **1**

↳ each friend gets 14

- 12) Is 197 divisible by 9? Use the digit-sum trick. **no**

↳ digits add to 17; 17 is not divisible by 9