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) What is the remainder of 28 ÷ 4? **0**
↳ *4 × 7 = 28*

2) Is 74 divisible by 3? Use the digit-sum trick. **no**
↳ *digits add to 11; 11 is not divisible by 3*

3) What is the remainder of 28 ÷ 9? **1**
↳ *9 × 3 = 27*

4) 26 marbles are shared equally among 8 friends. How many marbles are LEFT OVER? **2**
↳ *each friend gets 3*

5) What is the remainder of 84 ÷ 7? **0**
↳ *7 × 12 = 84*

6) 28 marbles are shared equally among 3 friends. How many marbles are LEFT OVER? **1**
↳ *each friend gets 9*

7) 43 marbles are shared equally among 3 friends. How many marbles are LEFT OVER? **1**
↳ *each friend gets 14*

8) 47 marbles are shared equally among 8 friends. How many marbles are LEFT OVER? **7**
↳ *each friend gets 5*

9) What is the remainder of 58 ÷ 4? **2**
↳ *4 × 14 = 56*

10) What is the remainder of 51 ÷ 5? **1**
↳ *5 × 10 = 50*

11) 41 marbles are shared equally among 8 friends. How many marbles are LEFT OVER? **1**
↳ *each friend gets 5*

12) Is 109 divisible by 9? Use the digit-sum trick. **no**
↳ *digits add to 10; 10 is not divisible by 9*