

Chapter 3  
**Lesson 4**

# Adding Decimals Using Mental Math

**You will need**

- thousandths grids
- pencil crayons



**GOAL**

Solve problems by using mental math to add decimals.

Ami's dog had puppies.  
Bingo's birth mass was 0.499 kg, and he gained 0.125 kg.

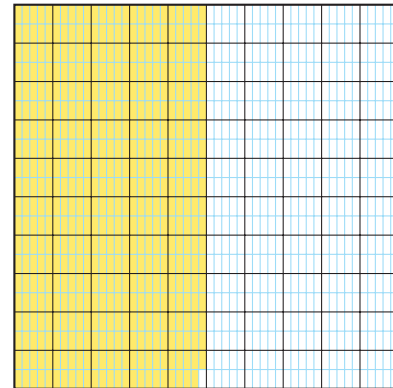


**How can you calculate Bingo's new mass using mental math?**



## Ami's Addition

I'll model 0.499 kg on a thousandths grid. Now I have to add 0.125 kg, the mass that Bingo gained. I know Bingo's new mass is greater than half a kilogram but less than one kilogram.



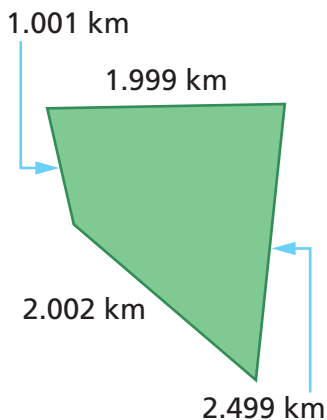
- How close is 0.499 to 0.500?
- How can you add 0.499 and 0.125 using your answer for Part A? Use the thousandths grid to explain.
- What is Bingo's new mass?

## Reflecting

- D.** How do you think Ami knew that Bingo's new mass was between half a kilogram and one kilogram?
- E.** How is adding 0.499 and 0.125 like adding 499 and 125? How is it different?

## Checking

- 1.** Goldie's birth mass was 0.398 kg, and she gained 0.079 kg.
  - a)** Is Goldie's new mass less than or greater than half a kilogram? Show how you estimated.
  - b)** Calculate Goldie's new mass. Show your thinking.



## Practising

- 2.** Calculate using mental math. Explain what you did.
  - a)**  $0.99 + 0.77$
  - b)**  $1.998 + 0.378$
- 3.** A diagram of a park is shown at the left.
  - a)** Calculate the distance around the park using mental math. Show your thinking.
  - b)** How do you know that your answer is reasonable?
- 4.** What is the missing number in each equation? Use mental math. Explain what you did for two equations.
  - a)**  $0.89 + a = 1$
  - b)**  $s + 5.75 = 10$
  - c)**  $9.995 + c = 10$
  - d)**  $y + 0.5 = 9$
- 5.**
  - a)** How do you know that the total mass of the two fish shown at the left is less than, but close to, 1 kg?
  - b)** Calculate the total mass.
- 6.** Select the correct answer. Explain what you did.
  - a)**  $0.455 + 0.239 = \blacksquare$       0.694 or 6.94 or 69.4
  - b)**  $1.567 + 2.999 = \blacksquare$       0.4566 or 4.566 or 45.66
- 7.** Why is it easy to add a number in the form  $\blacksquare.999$  to another number with three decimal places? Use an example to explain.

