

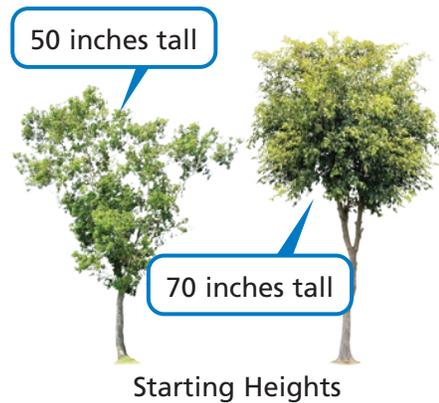
3. **MP Use Structure** Josh is 3 years older than Lynette. The sum of their ages is 49. Use ℓ to represent Lynette's age. Write expressions for Josh's age and Lynette's age, and use the expressions to write an equation relating their ages. Use the equation to determine Josh's age and Lynette's age.

Equation: _____

Lynette's age: _____

Josh's age: _____

4. A scientist conducts an experiment with two trees over many years. The shorter tree has organic compost applied to it, and the taller tree does not. The shorter tree grows at an average rate of 8 inches per year. The taller tree grows at an average rate of 6 inches per year.



- A. Complete the equation to represent the trees having the same height after t years.

$$50 + 8t = \underline{\hspace{2cm}}$$

- B. After how many years will the heights of the two trees be equal?

_____ years

- C. What will be the height of the trees when they are the same height?

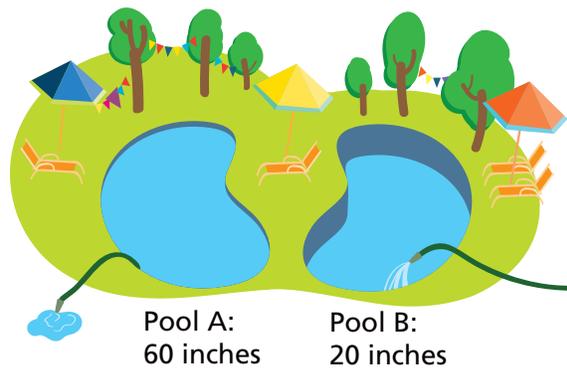
_____ inches

5. **MP Model with Mathematics** For Pool A, the water level is dropping 2.5 inches per hour. For Pool B, the water level increases 2.5 inches per hour. Starting water levels are shown. When will the pools have the same water level? Let h be the number of hours. Write an equation and solve.

Equation: _____

$h =$ _____

The pools will have the same water level after _____ hours.



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