

Problem Solving: Work Backward

Work backward to find each starting position.

1. **Starting** (x, y) . _____

4 units \rightarrow $(14, 20)$

2 units \uparrow $(14, 22)$

5 units \leftarrow $(9, 22)$ **Ending**

2. **Starting** (x, y) . _____

2 units \downarrow $(5, 6)$

3 units \rightarrow $(8, 6)$

1 unit \uparrow $(8, 7)$ **Ending**

3. **Starting** (x, y) . _____

8 units \uparrow $(5, 13)$

4 units \rightarrow $(9, 13)$

6 units \rightarrow $(15, 13)$ **Ending**

4. Martha must finish her math quiz in 35 minutes. She knows that there are 10 multiple-choice questions and 5 word problems. If each word problem takes her exactly 3 minutes to complete, how much time can she spend on each multiple-choice question?
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5. Kori arrived at school on time, at exactly 8:30 A.M. If it took him 15 minutes to walk to school, 10 minutes to eat breakfast, and 18 minutes to get ready, what time did he wake up this morning?

A 7:37 A.M. **C** 7:57 A.M.

B 7:47 A.M. **D** 8:07 A.M.

6. Jerry used his \$100 gift certificate to go shopping. He bought pants for \$25, a shirt for \$15, and socks for \$3. Then he bought a pair of shoes. Jerry still has \$27 left. How much were the shoes that he bought? Explain how you know.
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