## Problem Solving: Work Backward

Solve the problem by drawing a picture or a number line and working backward.

1. Will arrived at his mother's office at 3 p.m. It took him 30 minutes to walk from his home to the mall. He was in the mall for 45 minutes. It then took him 15 minutes to walk to his mother's office. At what time did Will leave home?
2. The test that Keyshawn's class took finished at 10:30 A.m. The first part of the test took 30 minutes. There was a 15 -minute break. The second part of the test also took 30 minutes. At what time did the test start?
3. At 12 noon, Leslie recorded the temperature as $56^{\circ} \mathrm{F}$. The temperature had increased by $8^{\circ} \mathrm{F}$ from 10 A.M. The temperature at 8 A.m. was $2^{\circ} \mathrm{F}$ warmer than it was at 10 A.M. What was the temperature at 8 А.м.?
4. The temperature was $16^{\circ} \mathrm{C}$ when Becky returned home at 6 p.м. The temperature was $4^{\circ} \mathrm{C}$ warmer at 3 P.m. than it was at 6 P.M. It was $3^{\circ} \mathrm{C}$ warmer at 12 noon than it was at 3 p.м. What was the temperature at 12 noon?
5. Elliot finished studying at $4: 45$ P.м. He spent 30 minutes reading a social studies chapter. He spent 45 minutes on his math homework. In between studying, Elliot took a 20-minute break.
At what time did Elliot begin studying?
A 3:00 p.м.
B 3:10 p.м.
C 3:30 р.м.
D 6:20 p.м.
