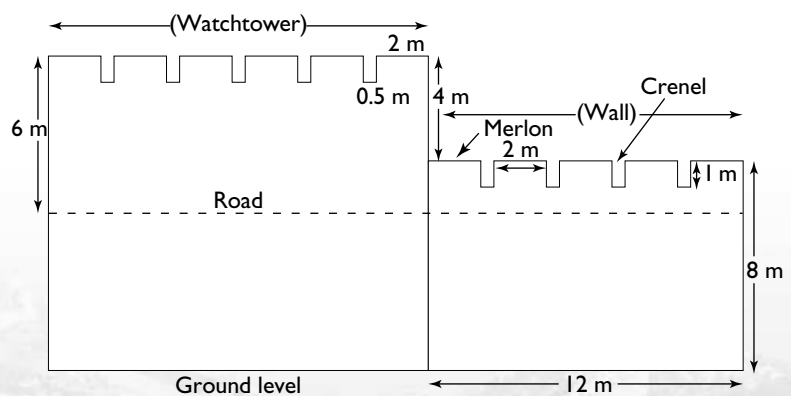


# Discovery Worksheets

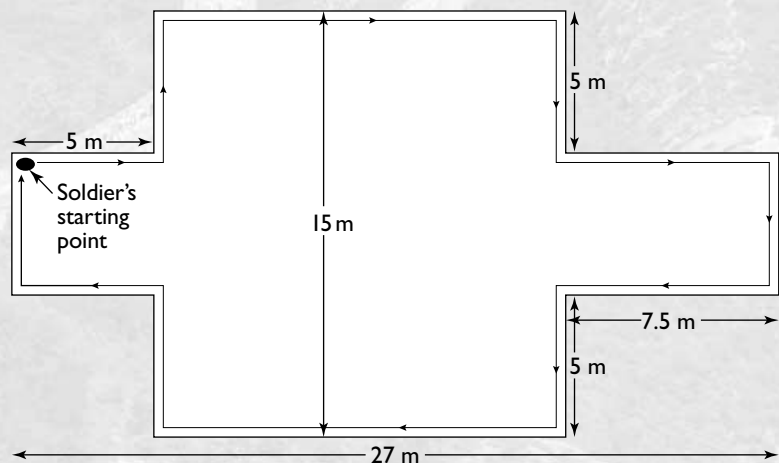
## Great Wall statistics

The longest human-made structure on Earth is the Great Wall of China. The wall kept northern invaders out of the various Chinese empires. The outer wall was topped with merlons and crenels. Soldiers could shelter behind the merlons when under attack and use the crenels to fire their weapons down on the enemy. Study the cross-section of a section of this wall below.

- How wide are the crenels?
- How high is the road within the Great Wall above ground level?
- How high are the tops of the merlons above the road in the wall section?
- How wide is the watchtower?
- How many square metres of bricks were needed to build the watchtower wall shown here?
- A typical brick in the Great Wall was 40 cm wide and 20 cm tall. How many bricks were needed to build the watchtower wall shown here?



- Look at the soldier patrol shown on the right.
  - What distance is one complete circuit of the section the soldier patrols?
  - If he marches at a speed of 1.2 m/s, how long does it take him to complete one circuit?
- If there is a watchtower at both ends of the wall and the watchtowers are on average 3.8 km apart, how many watchtowers are there if the wall is 6400 km long?



- A fit group of soldiers average 20 km a day along the wall. How long would it take the soldiers to travel from one watchtower to the next?



Atlas of Discovery, pp. 36–37;  
calculator (optional)