Country Mile

Directions:

In an old folk tale, a poor peasant is offered as much land as he can walk around from sunup to sundown. If you were given that offer, how much land could you claim? What shape would it be?

In order to answer these questions, you will have to:

• Determine the length of a day from sunup to sundown. Is it the same every day? At which time of year would you choose to make your walk?

• Determine how fast you can walk in an hour, and how many hours you could walk in a day. You should consider the need for food and rest during the day.

• Determine the best shape to walk around to claim the most land. Will it be a square? Some other rectangle? A circle? Some other shape?

• Calculate the amount of land (in square miles) that you could claim.

Your answer should include:

• Drawings of the different possible shapes you might use, with their respective areas and perimeters,

• A clear presentation of the methods you used to calculate:
  − the length of the day
  − the distance you can walk
  − the area you can claim

• All work should be clearly labeled.