TB page 505   #1, 2, 10-14, 32, 36

1. **Vocabulary** Finding distances using similar triangles is called ___?___ .
   (*indirect measurement* or *scale drawing*)

2. **Measurement** To find the height of a dinosaur in
   a museum, Amir placed a mirror on the ground 40 ft
   from its base. Then he stepped back 4 ft so that
   he could see the top of the dinosaur in
   the mirror. Amir's eyes were approximately
   5 ft 6 in. above the ground. What is the
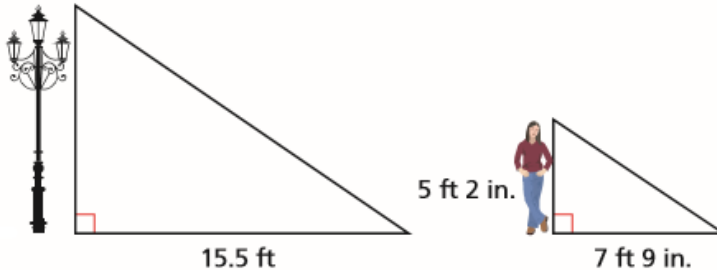   height of the dinosaur?

5 ft 6 in.

├─4 ft─┼──40 ft──┤
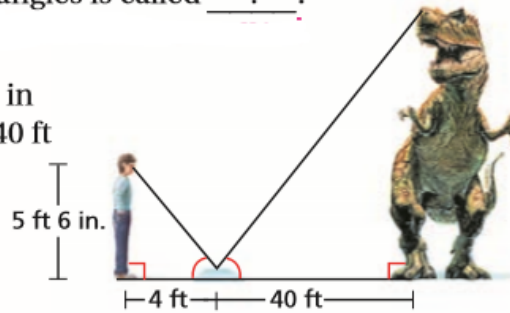
Given: rectangle *MNPQ* ~ rectangle *RSTU*

6 cm
R _____ S

10. Find the perimeter of
    rectangle *RSTU*.

4 cm
M _____ N

P = 14 cm
A = 12 cm²

11. Find the area of rectangle *RSTU*.

Q _____ P   U _____ T
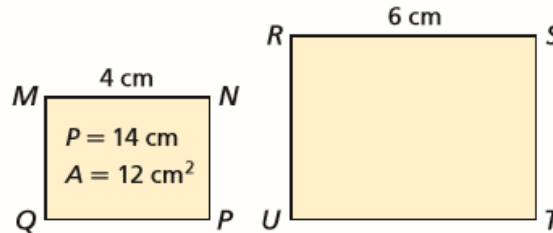
12. **Measurement** Jenny is 5 ft
    2 in. tall. To find the height of
    a light pole, she measured her
    shadow and the pole's shadow.
    What is the height of the pole?

15.5 ft

5 ft 2 in.

7 ft 9 in.

Space Exploration Use the following
information for Exercises 13 and 14.
This is a map of the Mars Exploration
Rover *Opportunity's* predicted landing
site on Mars. The scale is 1 cm:9.4 km.
What are the approximate measures of
the actual length and width of the ellipse?

13. *KJ*   14. *NP*
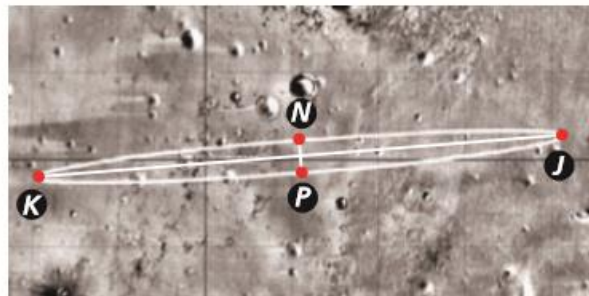
32. **Estimation** The photo shows
    a person who is 5 ft 1 in. tall
    standing by a statue in Jamestown,
    North Dakota. Estimate the actual
    height of the head of the statue by
    using a ruler to measure her height
    and the height of the head of the
    statue in the photo.

36. The ratio of the perimeter of square *ABCD* to the
    perimeter of square *EFGH* is $\frac{4}{9}$. Find the side
    lengths of each square.

2x
H _____ E

$x - 2$
A _____ B

D _____ C

G _____ F