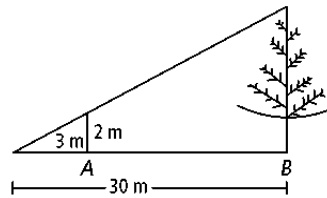
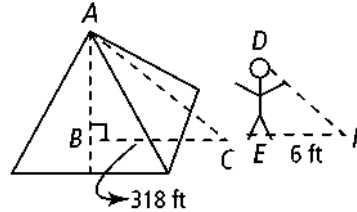


A. Read the information, Draw an illustration if there is not one and solve the problem

1. A stick 2 m long is placed vertically at point *B*. The top of the stick is in line with the top of a tree as seen from point *A*, which is 3 m from the stick and 30 m from the tree. How tall is the tree?



2. Thales was an ancient philosopher familiar with similar triangles. One story about him says that he found the height of a pyramid by measuring its shadow and his own shadow at the same time. If the person is 5-ft tall, what is the height of the pyramid in the drawing?

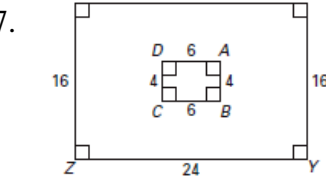
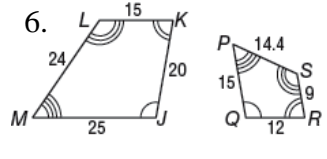
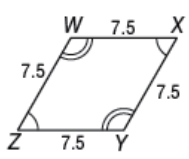
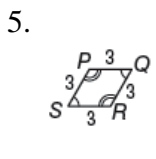
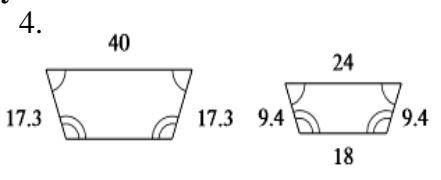
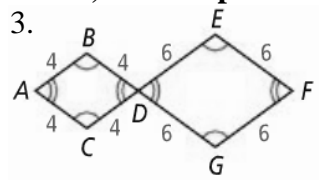
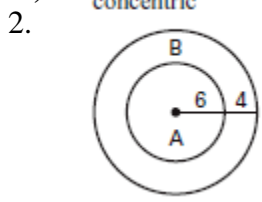
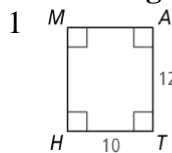


3. A 1.6-m-tall woman stands next to the Eiffel Tower. At this time of day, her shadow is 0.5 m long. At the same time, the tower's shadow is 93.75 m long. How tall is the Eiffel Tower?

4. At 4:00 p.m. Karl stands next to his house and measures his shadow and the house's shadow. Karl's shadow is 8 ft long. The house's shadow is 48 ft long. If Karl is 6 ft tall, how tall is his house?

5. A 1.4-m tall child is standing next to a flagpole. The child's shadow is 1.2 m long. At the same time, the shadow of the flagpole is 7.5 m long. How tall is the flagpole?

B. If the figures are similar, write a similarity statement, if not explain why.



C. If the triangles are similar, state the postulate you can use to prove it and write similarity statement.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.
- 24.

D. Determine if the $BD \parallel AE$. Show your work.

- 1.
- 2.
- 3.
- 4.