PAP Geometry   Name _____
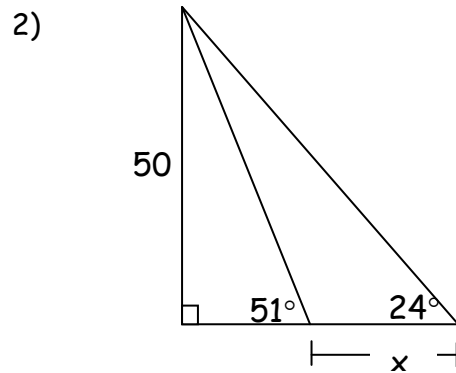9.1-9.4 Trig Intro and Ratios

SHOW ALL WORK. Round lengths to the thousandths.

For #1-2, solve for x.

1)

63 | 51°
   |____
      x

2)

50 | 51°   24°
   |_____
        x
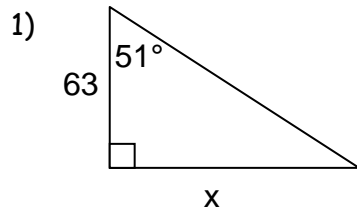
3) What is the perimeter of the given triangle?

18 cm

21°
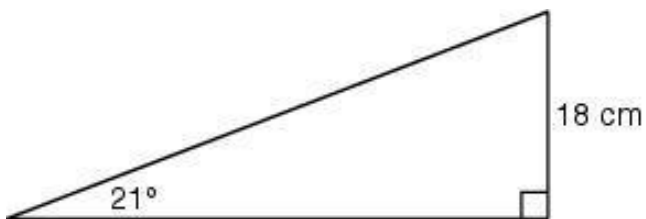
4) A surveyor is standing 118 ft from the base of the Washington Monument. The surveyor measures the angle between the ground and the top of the monument to be 78°. Find the height, h, of the Washington Monument to the nearest foot.

5) You own your own auto repair shop and need to build a ramp so your mechanics can easily get under the cars when doing repair work. You want the height of the structure to be 6.2 feet, and figure that the angle of elevation of the ramp should be no more than 20° (so it will not be too steep for a car to go up). What should the total length of the ramp be if the structure is to meet these requirements?

Ramp
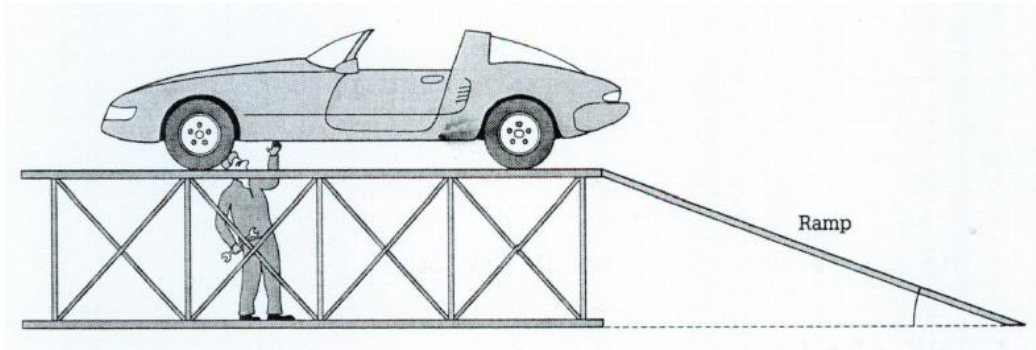
6) The figure below shows the configuration for a bunch of steel plates that must be drilled with 3 holes; one at A, one at B, and one at C. You need to calculate sides CB and AC in order to position the drill table to do the job accurately. How long are they?

CB = _____

AC = _____

73°

A

B

6.28 inches
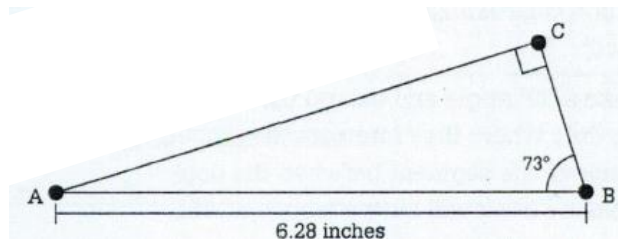
7) A person who is 1.5 m tall is standing 20 m from the base of a building. He sights the top of the building with an angle of elevation of 58°.   Find the height of the building to the nearest meter.