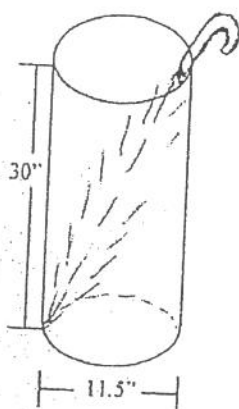# Umbrellas

You want to purchase an umbrella stand. You see one at the store that is 30 inches in height and has a diameter of 11.5 inches as shown below:

A. What is the length of the umbrella (not including the handle) in inches that will fit in the stand. Round to the nearest hundredth. Show your work.

B. How tall of an umbrella stand would you need to hold a 36-inch umbrella in the same manner and still have a base of 11.5 inch? Round to the nearest whole number. Show your work.

Umbrellas Rubric

MATHEMATICS SCORING MATERIAL

LOOK FORS:

A. 2 points

$$30^2 + 11.5^2 = c^2$$
$$900 + 132.25 = 1032.5$$
$$32.13"$$
The umbrella is 32.13 inches long.

answer (1 point)
work (1 point)

B. 2 points

$$11.5^2 + b^2 = 36^2$$
$$132.25 + b^2 = 1296$$
$$b^2 = 1163.75$$
$$b = 34.11$$
The stand needs to be 34 inches tall.

answer (1 point)
work (1 point)

If student scores a four and makes rounding error(s), change score to three. Otherwise do not deduct for rounding error(s).

SCORING GUIDE:

Score	Description
4	Student scores 4 points
3	Student scores 3 points
2	Student scores 2 points
1	Student scores 1 point
0	Response is totally incorrect or irrelevant.
Blank	No response