Kerry Ojakian's MTH 28 Class
Class Assignment #21

1. Suppose a right triangle has a hypotenuse of length 100 and an angle of $50°$. Find the length of the side opposite the $50°$ angle.

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2. Solve the right triangle ABC using the given information:
$m\angle C = 90°$, $m\angle B = 45°$, $c = 50$.

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3. Solve the right triangle ABC using the given information:
$m\angle C = 90°$, $m\angle A = 35°$, $b = 30$.

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4. The angle of elevation of the top of a building is 40^o from an observation point 100 ft. from the base of the building. Find the height of the building (in terms of a trig function).

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5. The angle of elevation of the top of a building is 30^o from an observation point 100 ft. from the base of the building. Find the height of the building (exactly, with no trig function in the final answer).

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6. A 20 meter ladder leans against a building so that the angle between the ground and the ladder is 37^o. How high does the ladder reach up the side of the building?

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7. Suppose that a 440-foot tall redwood tree grows vertically. You walk some distance from the tree and measure the angle of elevation to the top of the tree to be 45^o. How far from the base of the tree are you?

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8. Suppose that one end of a 35 foot cord is nailed into a wall at some height above the ground. The other end of the cord is spiked into the ground. The cord makes a 20^o angle with the wall. How far is it from the base of the wall up to the nail attaching the cord to the wall.
