Name:		Dat	te:	
SohCahTo	oa Word Problems HW			
1)	A wooden beam 24 feet long leans against a wall and makes an angle of 71° with the ground. How high up the wall does the beam reach to the nearest foot?	4)	A 20-foot pole leaning against a wall reaches a point 18 feet above the ground. What is the angle which the pole makes with the ground to the nearest degree?	
	A) 8 feet C) 70 feet B) 23 feet D) 25 feet		A) 64° B) 26°	C) 48° D) 42°
	B) 23 Rect		B) 20	D) 42
2)	A ladder leaning against a building makes an angle of 65° with the ground and reaches a point on the building 20 feet above the ground. What is the length of the ladder to the nearest foot?  A) 9 feet  C) 47 feet  B) 41 feet  D) 22 feet	5)	When the plane had for the airport where it has covered a horizontal of What is the angle at work from the ground to the A) 28° B) 62°	nd taken off, it had distance of 3,660 feet. which the plane rose
3)	An airplane climbs at an angle of 13° with the ground. What is the distance it has traveled (to the nearest hundred feet) when it has attained an altitude of 400 feet?  A) 410 feet B) 2,000 feet C) 1,800 feet D) 1,700 feet	6)	At a point on the groufoot of a tree, the ang top of the tree is 48° the tree to the nearest A) 50 feet B) 30 feet	le of elevation of the . What is the height of

- \_\_\_\_7) A boy visiting Chicago views the Sears
  Tower from a point on the ground which is
  1,240 feet from the base of the building. The
  angle of elevation from the boy to the top of
  the building is 49°. What is the height of the
  building to the nearest foot?
  - A) 814 feet
  - B) 1,078 feet
  - C) 1,426 feet
  - D) 936 feet

- \_ 8) The angle of depression of an object on the ground is 14° from the top of the tallest building in the world, one of the Petronas towers in Malaysia, which is 1,483 feet high. What is the distance from the object to the base of the tower to the nearest foot?
  - A) 370 feet
  - B) 6,130 feet
  - C) 1,528 feet
  - D) 5,948 feet

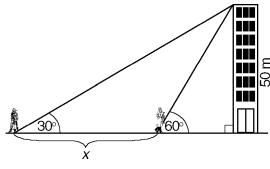
- 19) The top of a ladder leaning against a building reaches a point on the building which is 29 feet above the ground. If the base of the ladder is 7 feet from the building, what is the measure of the angle that the ladder makes with the level ground to the nearest degree?
  - A) 76°

C) 57°

B) 14°

D) 36°

Adam and Brian are standing some distance apart on the same side of a building 50 m tall. From where Adam stands, the angle of elevation of the top of the building is  $30^{\circ}$ . From where Brian stands, the angle is  $60^{\circ}$ . What is the distance x between Adam and Brian to the nearest tenth of a meter?



- A) 57.7 m
- C) 28.9 m
- B) 42.3 m
- D) 86.6 m