Warm Up

1. Donathan is on a hot air balloon ride. He sees his car way down below him. He knows his altitude is 82 meters, and guesses his angle of depression to be about 32 degrees. How far from his car is he?

Homework

1) 78.8 feet

2) 59.3 m

3) 5.7°

4) 68.2°

5) 12.2 m

6) Yes, because 23.6° < 30°.

Day 7

Warm Up

1) Ethan is going water skiing. The length of a water ski jump is 720 cm, and it is 415 cm tall. At what angle will Ethan go uphill?

2) From the top of a lighthouse 160 feet high, the angle of depression of a boat out at sea is 24°. Find, to the nearest foot, the distance from the boat to the foot of the lighthouse. (The foot of the lighthouse is at sea level).

Homework

1) 78.8 feet

2) 59.3 m

3) 5.7°

4) 68.2°

5) 12.2 m

6) Yes, because 23.6° < 30°.

Homework

1) 30 feet

2) 30°

3) 53.1°

4) 96.59°

5) $\tan^{-1}(\frac{4.16}{80})$

6) 401.92+250=651.92 feet

80 feet

Brandon

θ

Green line is parallel to road.
Intersects pole at height of 50 inches

4.16 ft

θ

Kelsey
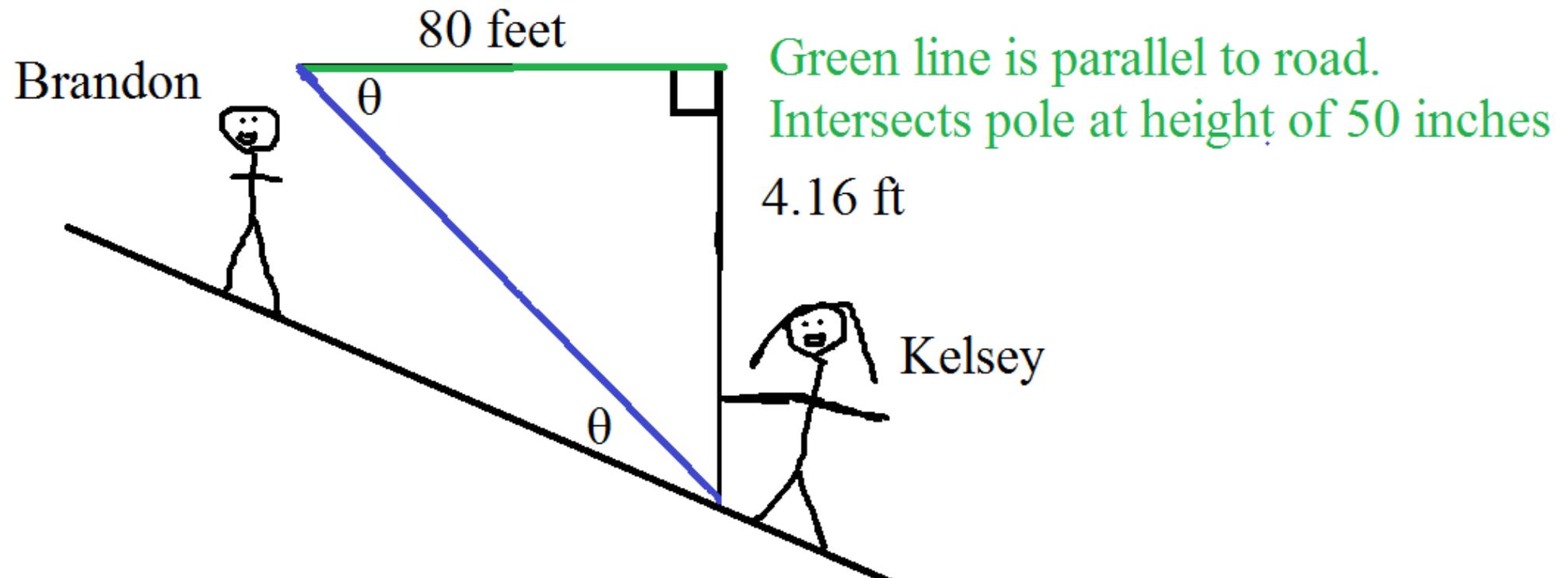
Notes

Sean launched a model rocket, and found it stuck in a tree. He knows the base of the tree is 19 feet from the launch site. The rocket is now at the top of a 23 foot tree. In order to avoid the tree next time, he needs the angle of elevation from the launch site to the top of the tree. What is this angle? Round up to the next degree.

Notes

Emmie, who is 5' 7", is flying a kite. She knows the angle of elevation to her kite is 63 degrees. Emmie got an awesome kite with a 30-yard string length. With all the string let out, how high is her kite up in the air?

Notes

John walked upstairs to the second floor of his house and realized he left his phone at the bottom of the stairs. He is too lazy to get his phone for himself and yells to Philip to throw it up to him. From the bottom of the stairs, the phone is thrown at a 46° angle and travels 16 ft straight through the air. How high are the stairs?

Notes

Firefighter Demi sees a fire on the 2nd floor of a house. She knows the fire is 20 feet off the ground, and she is 12 feet from the building. At what angle does Demi have to hold the hose to reach the base of the fire if she is 6 feet tall?

Notes

Kevin is on the roof of HHS looking for his lost dog. He looks left and sees Chelsea on the ground at a 32° angle. He looks right and sees his dog at a 62° angle. If HHS is 60 feet tall, how far does Chelsea have to run to catch the dog and save the day?