

Name _____

1. Emily is setting up a tent for a camping trip. If the tent measures 8 feet in width and 6 feet in length, what's the length of the guy rope she needs to secure it, assuming it's staked diagonally?
2. Jack is arranging tiles in a square pattern on his patio. If each side of the square measures 10 feet, what's the length of the diagonal line connecting two opposite corners of the square?
3. Mia is flying a kite in the park. If the kite string measures 20 meters, and she lets it out at a 45-degree angle from the ground, how high above the ground is the kite flying?
4. Ethan is constructing a skateboard ramp in his backyard. If the width of the ramp is 3 meters and the height is 4 meters, what will be the length of the hypotenuse, representing the slope?
5. Sophia is rearranging her room. If her bed is placed 4 feet away from one wall and the headboard forms a right angle with the wall, how far apart are the foot of the bed and the wall?
6. Lucas is setting up a triangular garden in his backyard. If one side measures 7 feet and the other measures 9 feet, what's the length of the diagonal side?
7. Olivia is a painter drawing a diagonal line across a rectangular canvas. If the canvas measures 16 inches in width and 20 inches in length, what's the length of the diagonal line she's drawing?
8. Daniel is an architect designing a triangular plaza. If one side of the plaza measures 50 meters and the adjacent side measures 30 meters, what's the length of the diagonal side, representing the shortest distance from one corner to the farthest corner?
9. Sarah is a carpenter building a bookshelf in her room. If the shelf is 5 feet tall and 3 feet wide, how long should the diagonal shelf be, ensuring it fits perfectly in the corner?
10. Noah is setting up a triangular tent for a camping trip. If the height of the tent is 6 feet and the length of the base is 8 feet, how long should the diagonal side be to fit the tent poles perfectly?

