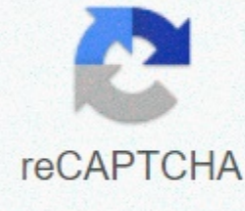I'm not robot

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Trigonometry word problems pdf

3. On a windy day, a 90-foot rope tightly secures the hot air balloon to a stake in the ground. From balloons, the angle of depression stake is 62º. Find, to the nearest foot, the height of the balloon, assuming the wind is constant. Select: Trigonometry Word LoadIng Issues... Find a content error? Tell us if you see this message, it means that we are having trouble loading external resources on our website. If you're behind a web filter, make sure your domains *.kastatic.org and *.kasandbox.org unblocked. Question 1 :The elevation angle of the top of the building at a distance of 50 m from the feet on the horizontal plane is at 60 degrees. Find the height of the building. Question 2 :Ladders placed against the wall so that they reach the top of the wall 6 m high, and the ladder is tilted at an angle of 60 degrees. Find out how far the ladder is from the base of the wall. Question 3 :The dragon string is 100 meters long and makes a 60° angle with horizontal. Find the height of the dragon, assuming there's no suptily in the sequence. Question 4 :From the top of the tower 30 m high man observes the base of the tree at an angle of depression of 30 degrees. Find the distance between the tree and the tower. Question 5: A man wants to determine the height of a bright house. He measured the angle on A and found that tan A = 3/4. What is the height of a bright house if A is 40 m from the base ? Question 6 :On Ladder are leaning against the vertical wall makes an angle of 20° with the ground. The base of the ladder is 10 feet from the wall. Find the length of the ladder. Question 7 :A kite flying at a height of 65 m is attached to a wire tilted at 31° to the horizontal. What's the length of the wire? Question 8 :D oil string between the dragon and the point on the ground is 90 m. If the string is to create θ with soil level such as tan θ = 15/8, how high will the putty be ? Question 9: The aircraft is observed approaching an air point. It is located at a distance of 12 km from the observation point and forms an elevation angle of 50 degrees. Find the height above the ground. Question 10 :The balloon is connected to the weather station with a cable 200 m long tilted at an angle of 60 degrees . Find the height of the balloon from the ground. (Imagine there's no downtie in the cable) Answer Question 1 :The elevation angle of the top of the building at a distance of 50 m from the foot on the horizontal plane is at 60 degrees. Find the height of the building. Solution : Now we need to find the length of the side AB.tanθ = Opposite side / Adjacent sidetan 60 ° = AB / BC√3 = AB / 50√3 x 50 = ABAB = 50√3Approksimat value √3 is 1.732AB = 50 (1.732) AB = 86.6 mSo, the height of the building is 86.6 m.question 2 :Ladders set against the wall so that it reaches the top of the wall 6 m high, and the ladder is tilted at an angle of 60 degrees. Find out how far the ladder is from the base of the wall. Solution : Here AB represents the height of the wall, BC represents the distance between the wall and the base of the ladder, and AC represents the length of the ladder. In the right triangle ABC, the side that is opposite to the 60-degree angle is known as the opposite side (AB), the side that is opposite to 90 degrees is called the hypotenuse side (AC), and the remaining side is called the adjacent side (BC). Now, we need to find the distance between the base of the ladder and the wall. That is, we need to find the length of BC.tan θ = Opposite side / Adjacent sidetan60 ° = AB / BC√3 = 6 / BCBC = 6 / √3BC = (6 / √3) x (√3 / √ √ <7>3)BC = (6√3)/3BC = 2√3Approksimat value √3 is 1.732BC = 2 (1,732)BC = 3,464 m So, the distance between the base of the ladder and the wall is 3,464 m.Question 3 :The dragon string is 100 meters long and makes an angle of 60° with horizontal. Find the height of the side of AB. Sin θ = Opposite Side/Hypotenuse sidesinθ = AB/ACsin 60° = AB/100√3/2 = AB/100(√3/2) x 100 = ABAB = 50 √3 mSo, height of the dragon from the ground 50 √3 m.Question 4 :From the top of the tower 30 m high man observes the base of the tree at the angle of depression measuring 30 degrees. Find the distance between the tree and the tower. Solution : Here AB represents the height of the tower, BC represents the distance between the base of the tower and the base of the tree. Now we need to find the distance between the base of the tower and the base of the tree (BC).tan θ = Opposite side / Adjacent sidetan 30 ° = AB / BC1 / √3 = 30 / BCBC = 30√3Approximat value √ 3 is 1.732BC = 30 (1.732) BC = 81.96 mSo, the distance between the tree and the tower is 51.96 m.Question 5 :Man wants to determine the height of the light house. He measured the angle on A and found that tan A = 3/4. What is the height of a bright house if A is 40 m from the base ? Solution : Now we need to find the height of the bright house (BC).tanA = Opposite side / Adjacent sidetanA = BC / ABGiven : tanA = 3 / 43 / 4 = BC / 403 x 40 = BC x 4BC = (3 x 40)/ 4BC = (3 x 10) = 30 m So, the height of the bright house is 30 m.Question 6 :Man wants to determine the height of the bright house. He ladder leaning against the vertical wall makes an angle of 20° with the ground. The base of the ladder is 10 feet from the wall. Find the length of the ladder. Solution : Now we need to find the length of the ladder (AC). Cos θ = Adjacent side / Hypotenuse sideCos θ = BC / ACCos 20 ° = 3 / AC0.9396 = 3 / ACAC = 3 / 0.9396AC = 3.192So, length is 3,192 m.Question 7 :A dragon flying at a height of 65 m is attached to a wire tilted at 31° to the horizontal. What's the length of the wire? Solution : Now we need to find the length of the AC series. Sin θ = Opposite Side/Hypotenuse sideSin θ = AB/ACSin 31° = AB/AC0.5150 = 65/ACAC = 65/0.5150AC = 126.2 mHence, the length of the string is 126.2 m.Question 8 :D oil string between the dragon and the point on the ground is 90 m. If the string is to create θ with soil level such as tan θ = 15/8, how high will the putty be ? Solution : Now we need to find the length of the ab side. Tan θ = 15/8 --------> crib θ = 8/15csc θ = √(1+ cot²θ)csc θ = √(1 + 64/225)csc θ = √(225 + 64)/225csc θ = √289/225csc θ = 17/15 -------> Sin θ = 15/17Ali, sin θ = opposite side/ Hypotenuse side = AB/ACABACAB/AC = 15/17AB/90 = 15/17AB = (15 x 90)/17AB = 79.41So, tower height is 79.41 m.Question 9 :P romater is that the aircraft is approaching the air point. It is located at a distance of 12 km from the observation point and forms an elevation angle of 50 degrees. Find the height above the ground. Solution: Now we need to find the length of the aircraft above the ground. sin θ = Opposite side/Hypotenuse sidesin 50° = AB/AC0.7660 = h/120.7660 x 12 = hh = 9.192 kmSo, the height of the plane above ground is 9,192 km. Question 10 :The balloon is connected to the weather station with a cable 200 m long tilted at an angle of 60 degrees . Find the height of the balloon from the ground. (Imagine there's no downtie in the cable) Solution: Now we need to find the length of the ab side. According to the above figure, AB indicates the height of the balloon above the ground. sin θ = Opposite side/Hypotenuse side sin θ = AB/ACsin 60° = AB/200√3/2 = AB/200AB = (√3/2) x 200AB = 200AB100√3Approksimate value of √3 is 1,732AB = 100 (1,732)AB = 173.2 mSo, the height of the balloon from the ground is 173.2 m. In addition to the things provided in this section, if you need any other things in mathematics, please use our google custom search here. If you have any feedback on our math content, please send us : v4formath@gmail.com we always appreciate your feedback. You can also visit the following websites on different things in mathematics. PROBLEMS WITH WORDSHCF and LCM word problems Word problems On simple equations Word problems on linear equations Word problems on square equationsAlgebra problems with words problems with words on trainsmaArea and perimeter problems with words Problems with direct variations and reverse variations Problems with words about unit priceWord problems on unit rate Text issues on price comparisonConvert common word units Metric Unit Word IssuesWord Issues on Simple InterestWord Issues on Complex InterestWord Issues at Corner

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