

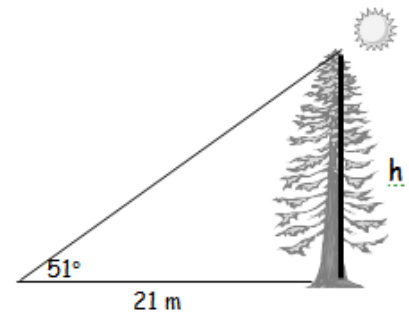
9.4 - 9.6 Applications of Trigonometry DAY THREE CYU 3

Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

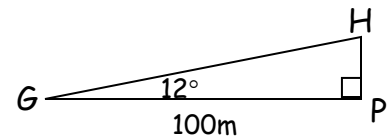
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Real World Application			1 - 12
Rounding answers	1 - 12		
Appropriate units	1 - 12		
Solving Right Triangles		1 - 12	
Applying Trig Functions		1 - 12	

1 - 5: Express lengths correct to the nearest meter & angles correct to the nearest degree. Draw a diagram if one is not provided.

1. A tree casts a shadow 21 m long. The angle of elevation of the sun is 51° . What is the height of the tree?



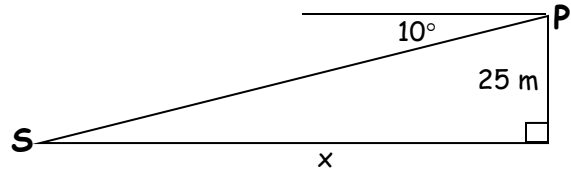
2. A helicopter (H) is hovering over a landing pad (P) 100 m from where you are standing (G). The helicopter's angle of elevation with the ground is 12° . What is the altitude of the helicopter?



3. You are flying a kite and have let out 80 m of string. The kite's angle of elevation with the ground is 40° . If the string is stretched straight, how high is the kite above the ground?
4. A 15 m pole is leaning against a wall. The foot of the pole is 10 m from the wall. Find the angle the pole makes with the ground.
5. A guy wire reaches from the top of a 120 m television transmitter tower to the ground. The wire makes a 63° angle with the ground. Find the length of the guy wire.

6. An airplane climbs at an angle of 18° with the ground. Find the ground distance the plane travels as it moves 2500 m through the air. Give your answer to the nearest 100 m.

7. A lighthouse operator at point P 25 m above sea level sights a sailboat at point S. The angle of depression of the sighting is 10° . How far is the boat from the base of the lighthouse? Give your answer to the nearest 10 m.



8. A person on a building 200 m high looks at a flower bed below. The angle of depression is 12° . How far is the flower bed from the foot of the building?
9. A ramp is 150 ft long and rises vertically 25 ft. Find the angle of elevation of the ramp.
10. From a treehouse, the angle of depression to the house measures 53° . The tree is 12 m from the base of the house. How far is the tree house from the base of the house?
11. A building casts a shadow 345 ft long when the angle of elevation to the sun is 48° . Find the height of the building.
12. A person looked up at a bird flying overhead. The bird was directly over a tree 100 ft away. The angle of depression was 42° . How high was the bird flying?

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.

● ● ● ● ● ● ●

1	2	3	4	5	6	7	8
Basic		Intermediate			Advanced		Solved ALL!

