Name Key Date Pd

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)*

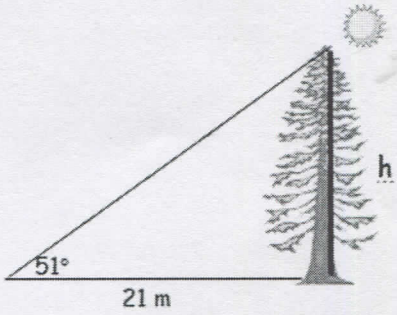
N *Use when a question was not even attempted*

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.

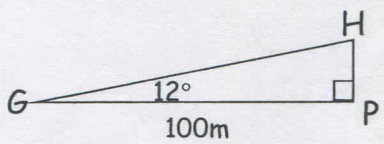
1. A tree casts a shadow 21 m long. The angle of elevation of the sun is 51°. What is the height of the tree?

26m



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?

21m



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?

51m

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.

48°

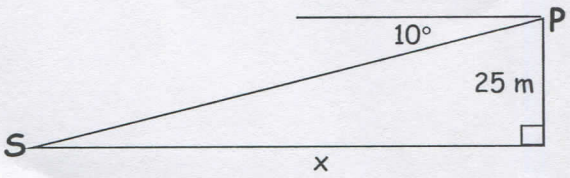
5. A guy wire reaches from the top of a 120 m television transmitter tower to the ground. The wire makes a 63° angle with the ground. Find the length of the guy wire.

135m

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.

2400 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.



140m

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?

941m

9. A ramp is 150 ft long and rises vertically 25 ft. Find the angle of elevation of the ramp.

10°

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?

20m

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.

383ft

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?

90ft

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.