

Chapter 2 - TRIGONOMETRY EXAM REVIEW

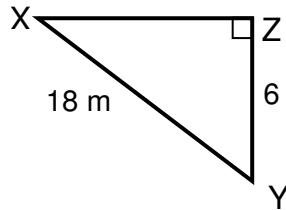
Name: _____

Selective Response (11 points):

Identify the choice that best completes the statement or answers the question.

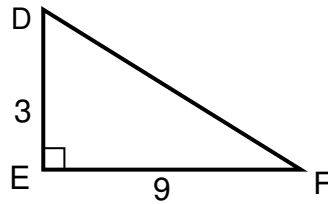
1. Determine the measure of side y to the nearest hundredth of a metre.

- A. 18.97 m
- B. 16.97 m
- C. 12.00 m
- D. 6.69 m



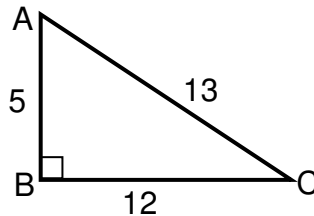
2. Determine the measure of $\angle D$ to the nearest degree.

- A. 18°
- B. 19°
- C. 71°
- D. 72°



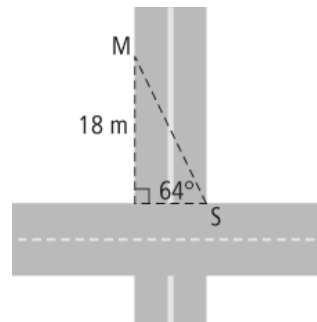
3. What is $\tan A$?

- A. $\frac{12}{5}$
- B. $\frac{13}{12}$
- C. $\frac{5}{12}$
- D. $\frac{12}{13}$



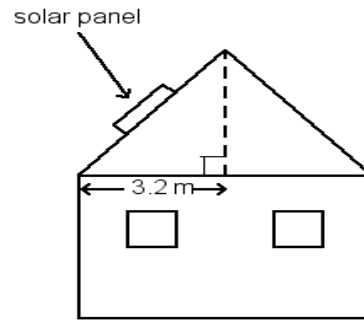
4. A surveyor, S, is measuring the width of a street, using a marker, M. The surveyor cannot measure the width directly, because there is too much traffic. She stands on the east side of the intersection. Using the diagram below, find the width of the street, to the nearest tenth of a metre.

- A. 6.9 m
- B. 24.1 m
- C. 13.1 m
- D. 8.8 m



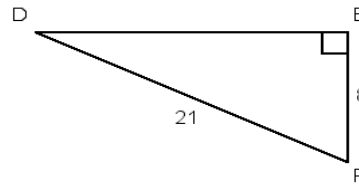
5. The angle of inclination of a solar panel on the roof of a cottage is 57° . Determine the height of the roof, to the nearest tenth of a metre.

- A. 3.8 m
 B. 4.9 m
 C. 2.1 m
 D. 5.9 m



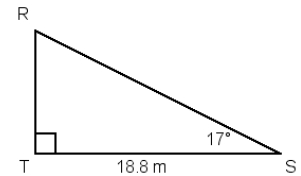
6. Determine the measure of $\angle D$ to the nearest tenth of a degree.

- A. 67.6°
 B. 69.1°
 C. 22.4°
 D. 20.9°



7. Determine the length of RS to the nearest tenth of a metre.

- A. 19.7 m
 B. 5.7 m
 C. 19.0 m
 D. 21.3 m



8. A tree broke 14 ft. above the ground. The top of the tree now touches the level ground and the trunk is still partially attached to the stump. The angle of inclination of the tree is 43° . To the nearest foot, determine the height of the tree before it broke.

- A. 35 ft. B. 33 ft. C. 29 ft. D. 21 ft.

9. A rope that anchors a hot air balloon to the ground is 136 m long. The balloon is 72 m above the ground. What is the angle of inclination of the rope to the nearest degree?

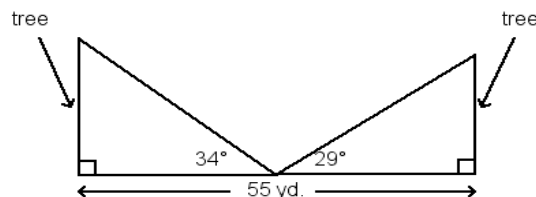
- A. 62° B. 58° C. 32° D. 28°

10. In the right $\triangle QRS$, $\angle S = 90^\circ$, $QS = 7$ cm and $QR = 18$ cm. What is the measure of $\angle Q$ to the nearest degree?

- A. 67° B. 56° C. 21° D. 18°

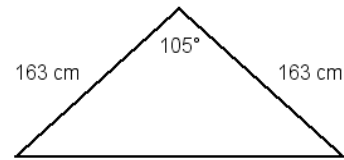
11. Two trees are 55 yd. apart. From a point halfway between the trees, the angles of elevation of the tops of the trees are measured. What is the height of each tree to the nearest yard?

- A. 37 yd.; 30 yd.
 B. 24 yd.; 23 yd.
 C. 19 yd.; 11 yd.
 D. 19 yd.; 15 yd.

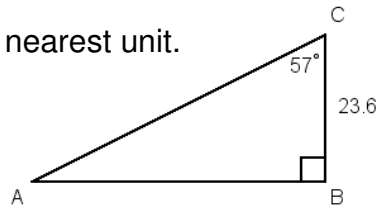


CONSTRUCTED RESPONSE (26 points): Show all work in the space provided. Pay attention to the number of decimal places and your rounding.

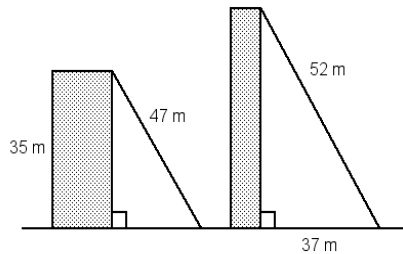
- Max's dog is lying on the ground 1.2 m away from him. The angle of elevation from the dog to the top of Max's head is 48° . How tall is Max, to the nearest hundredth of a metre? (2 points)
- A plane climbs at an angle of 39° through a distance of 12 km. What altitude (vertical height), rounded to the nearest tenth of a km, does it reach? (2 points)
- The front of a tent has the shape of an isosceles triangle with equal sides 163 cm long. The measure of the angle at the peak of the tent is 105° . Calculate the maximum headroom in the tent to the nearest centimetre. (2 points)



- Determine the perimeter of $\triangle ABC$ to the nearest unit. (3 points)

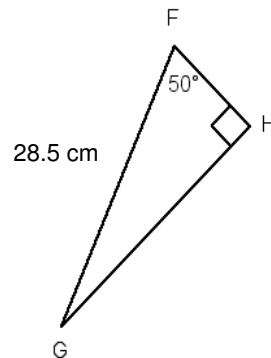


- Guy wires are attached to buildings as shown. A student says the angles of inclination of the wires are the same. Is the student correct? Justify your answer. (3 points)



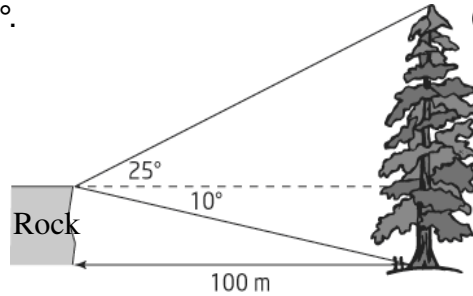
- Solve this right triangle. Give side lengths to the nearest tenth and angles to the nearest degree. Show all of your work. (3 points)

Side	cm	Angles	$^\circ$
f		F	
g		G	
h		H	



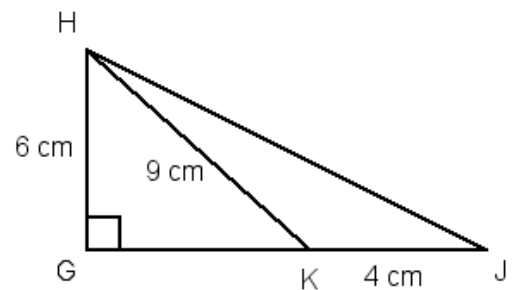
7. A rock face is 100 m from the base of a California redwood tree. The angle of elevation from the top of the rock face to the top of the tree is 25° . The angle of depression to the bottom of the tree is 10° . (4 points)

- a) Determine the height of the rock face, to the nearest tenth of a metre.



- b) Determine the height of the tree, to the nearest tenth of a metre.

8. Calculate the measure of $\angle GHJ$ to the nearest tenth of a degree. (3 points)



9. The length of the body diagonal (from A to F) in this rectangular prism is 61 cm. The width of the prism is 29 cm. The measure of $\angle AFH$ is 23° . Determine the height and the length of the rectangular prism to the nearest centimetre. (4 points)

