

Chapter 2 Practice Test

Multiple Choice

Choose the correct response to each question.

1. $\tan 47^\circ$ is

- A 1.0723 B 0.7313
C undefined D 0.6819

2. $\cos 55^\circ$ is

- A undefined B 0.8191
C 0.5735 D 1.4281

3. $\sin 49^\circ$ is

- A 0.7547 B 0.6560
C 1.150 D undefined

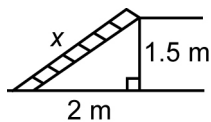
4. If $\sin A = 0.8829$, then $\angle A$ is approximately

- A 28° B 41°
C 62° D 0.015

5. If $\cos A = 0.8290$, then $\angle A$ is approximately

- A 34° B 0.9999
C 56° D 40°

6. A slide in a park has a vertical height of 1.5 m. The horizontal distance covered by the slide is 2 m. The length of the slide is

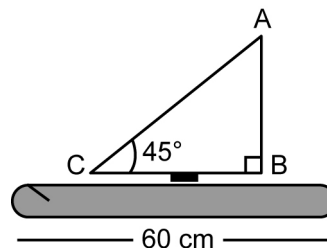


- A 2.5 m B 3.5 m
C 0.5 m D 6.25 m

7. A cat lying on the ground is 1.5 m away from his owner. The angle of elevation from the cat to his owner's head is 48° . How tall is his owner?

- A 1.00 m B 1.11 m
C 1.66 m D 1.35 m

8. Thi's model boat has a base 60 cm long. The horizontal length of the sail is half the length of the base of the boat. $\angle C$ is 45° . Which is the height of the sail?



- A 60 cm B 30 cm
C 21.21 cm D 42.43 cm

9. From a point 9.8 m from the base of a flagpole, the angle of elevation to the top of the pole is 48° . What is the height of the flagpole?

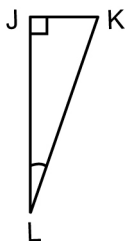
- A 10.88 m B 8.82 m
C 7.28 m D 6.55 m

10. Jan's tree house is 4.8 m above the ground. When he looks down at an angle of depression of 40° , he can see over the fence and into his neighbour's backyard. What is the horizontal distance from the base of the tree house to the neighbour's backyard?

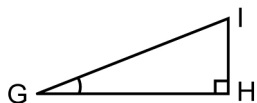
- A 5.720 m B 4.027 m
C 3.085 m D 3.677 m

Short Response

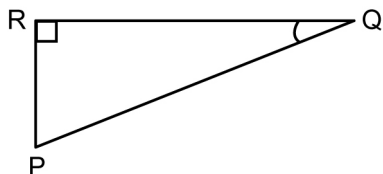
11. In $\triangle JKL$ below, JK is 4 cm, JL is 16 cm, and KL is 16.49 cm.



- Write the ratio comparing the length of the side opposite $\angle L$ to the length of the hypotenuse. Write the ratio as a decimal, rounded to two decimal places.
 - Write the ratio comparing the length of the side adjacent to $\angle L$ to the length of the hypotenuse. Write the ratio as a decimal, rounded to two decimal places.
12. In $\triangle GHI$ below, GI is 3.5 m and $\angle G$ is 33° . Determine the length of GH to the nearest tenth of a metre.



13. In $\triangle PQR$ below, PQ is 12.8 cm and $\angle Q$ is 42° . Determine the length of RP to the nearest tenth of a centimetre.



14. Draw $\triangle MNO$ with $\angle N = 90^\circ$, $MN = 14$ cm, and $NO = 16$ cm.
- Measure the length of MO and mark it on your triangle.
 - Write the ratio comparing the length of the side adjacent to $\angle O$ to the length of the hypotenuse. Write the ratio as a decimal, rounded to two decimal places.

Extended Response

15. Beatriz lives on Arc Avenue, which is 200 m long. Her aunt's house is on Tumble Street, which is 150 m long.



- Determine the distance that Beatriz travels if she goes along both streets from her house to her aunt's house.
 - What is the distance that Beatriz travels if she takes a diagonal shortcut?
 - How much shorter is the shortcut?
16. A truck parked on the street is 56 m from the base of the apartment building on the right. The angle of elevation from the truck to the top of the building is 40° . The parked truck is 49 m from the base of the apartment building on the left. The angle of elevation from the truck to the top of that building is 50° . Which building is taller? Explain.

