ALBERTA DISTANCE LEARNING CENTRE

Mathematics 10-3

MAT1793

Unit B: Right Angled Triangles

Chapter 3 Lesson 2

Student's Questions and Comments

FOR STUDENT USE ONLY

Student Name:

_____

FOR ADLC USE ONLY

Assigned to

_____

Marked by

_____

Date received

_____

Summary

	Marks Earned	Total Possible Marks	Percent
Lesson 2		51	

Teacher's Comments:

_____

Teacher's Signature

REVISED March 2020

CANADIAN CATALOGUING IN PUBLICATION DATA

MAT1793
Mathematics 10-3
ISBN: 978-1-927090-94-7
Workbook 3

4601 - 63 Avenue
Barrhead, Alberta Canada T7N 1P4

Printed in Canada

For Users of Alberta Distance Learning Centre Courseware
Much time and effort is involved in preparing learning materials and activities that meet curricular expectations as determined by Alberta Education. We ask that you respect our work by honouring copyright regulations.

Alberta Distance Learning Centre website:

http://www.adlc.ca

The Internet can be a valuable source of information. However, because publishing to the Internet is neither controlled nor censored, some content may be inaccurate or inappropriate. Students are encouraged to evaluate websites for validity and to consult multiple sources.

ADLC | Alberta Distance Learning Centre

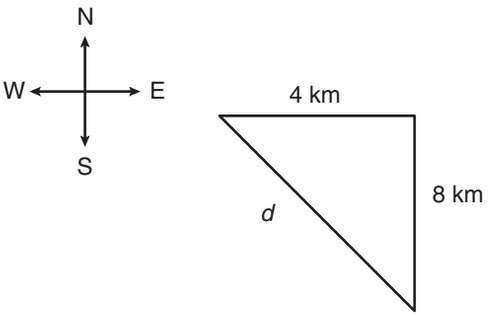
Lesson Assignment

This assignment includes short answer questions. Be sure to show all necessary work. You may ask for clarification from your teacher, but you will not be given the answer.

Lesson 2

Include a **formula** as part of your work where applicable.

(3) 1. Rick runs 8 km north, and then 4 km west. What is the shortest distance between where he started and where he finished?



(3) 2. A kite has a string that is 130 ft long. When the string is extended fully from the ground, and Jose is 125 ft away from the barn, the kite just touches the top of the barn. How tall is the barn? Round the answer to the nearest foot.
Hint: Draw a diagram.

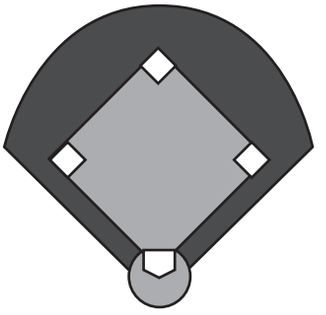
3. Dirk lives in a small northern Inuit community. His house is across the lake from the grocery store. In the summer, he drives 34 km south, and then 41 km east to get to the grocery store.

(1) a. How far does Dirk drive to get to the store in the summer?

(3) b. In the winter, the lake freezes, and Dirk can drive straight across the ice to the store. How far does he drive to get to the store in the winter? Round the answer to one decimal place.
Hint: Draw a diagram.

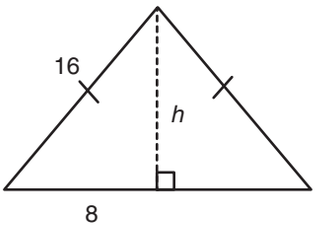
(1) c. How many kilometres shorter is it to drive across the lake?

(3) 4. A baseball diamond is a square with side lengths measuring 90 ft. To the nearest tenth of a foot, what is the distance from second base to home plate?

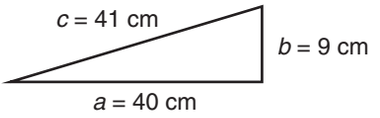


(3) 5. A 4 m ladder is leaning against a house. It reaches 3.5 m up the house. How far from the base of the house is the foot of the ladder? Round the answer to the nearest hundredth of a metre.

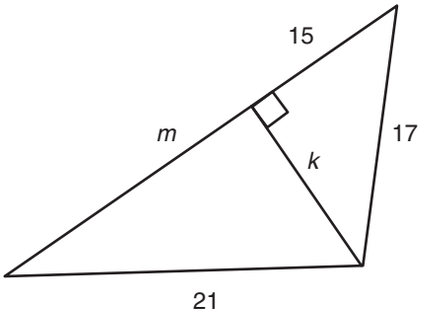
(3) 6. The side measure of an equilateral triangle is 16 in. What is the height of the triangle, to the nearest tenth of an inch?



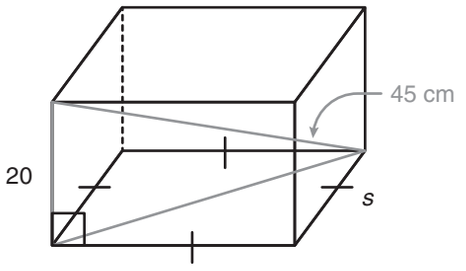
(3) 7. Is a triangle that has leg lengths of 9 cm and 40 cm, and a longest side of 41 cm, a right triangle?



(6) 8. To the nearest tenth, determine the value of m in the diagram shown.

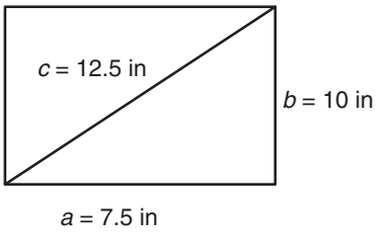


(5) 9. To ship a toy harp, the diagonal of a rectangular box must be 45 cm. The box must be 20 cm deep. If the base of the box is square, what are the dimension of the base, to the nearest tenth of a centimetre?
Hint: Begin by solving for the length of the bottom diagonal of the box.



10. Angie needs to make a rectangular picture frame with dimensions 7.5 in by 10 in. To be sure the corners are square, the diagonals need to be the same length. She thinks the diagonal measurements need to be 12.5 in.

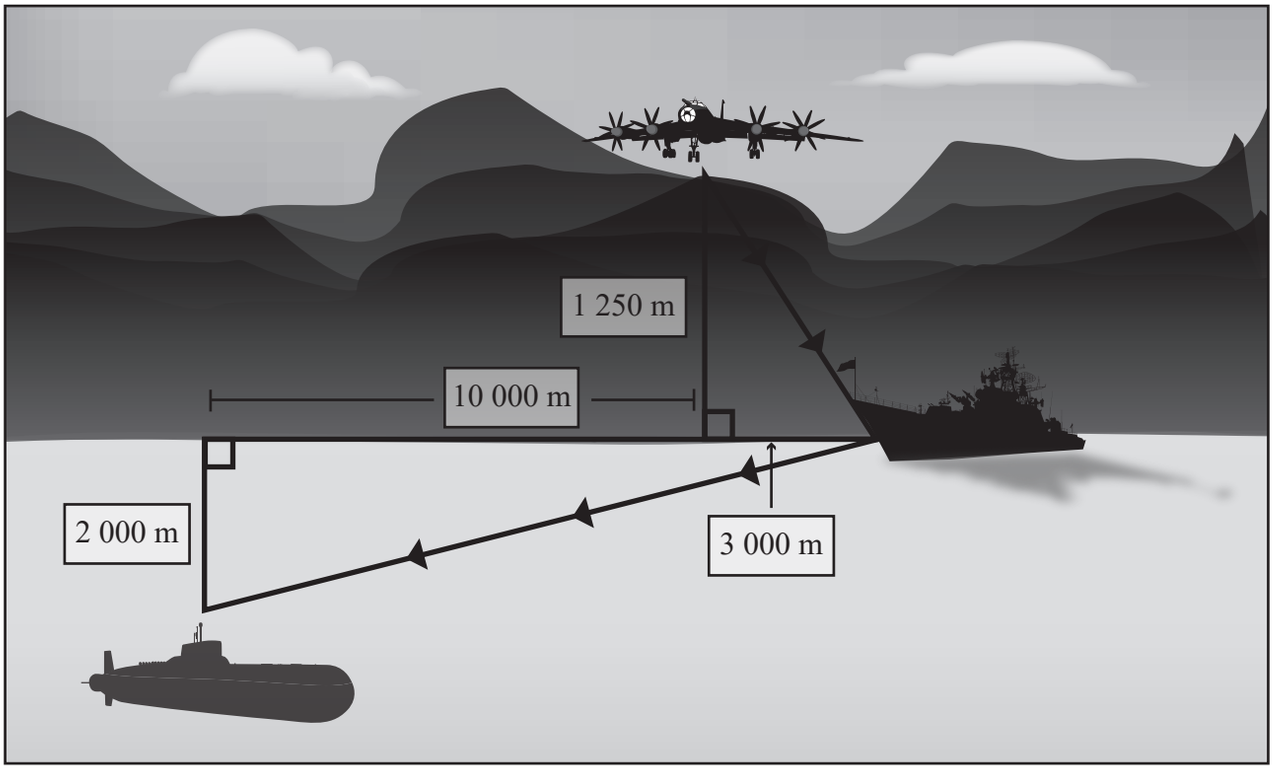
(3) a. If the diagonal measurement shown is 12.5 in, are the corners square?



(2) b. Explain how to use a 3: 4: 5 triangle to prove that the corners of the frame are square.
Hint: Use a diagram to help with the explanation.

(5) 11. A pilot is taxiing down a runway at the Calgary airport. He travels due west 300 yd, and then due south 500 yd. How much **shorter** would his taxiing be if he could travel directly southwest (diagonally)? Round the answer to the nearest yard.

(7) 12. An airplane sends a radio transmission to a ship. The ship then sends the transmission to a submarine. How far did the signal travel from the airplane to the submarine? Round the answer to the nearest metre.



/51

ADLC | Alberta Distance Learning Centre

adlc.ca
1-866-774-5333
info@adlc.ca

Alberta Distance Learning Centre
Box 4000 4601 – 63 Avenue
Barrhead, Alberta T7N 1P4

Revised March 2020