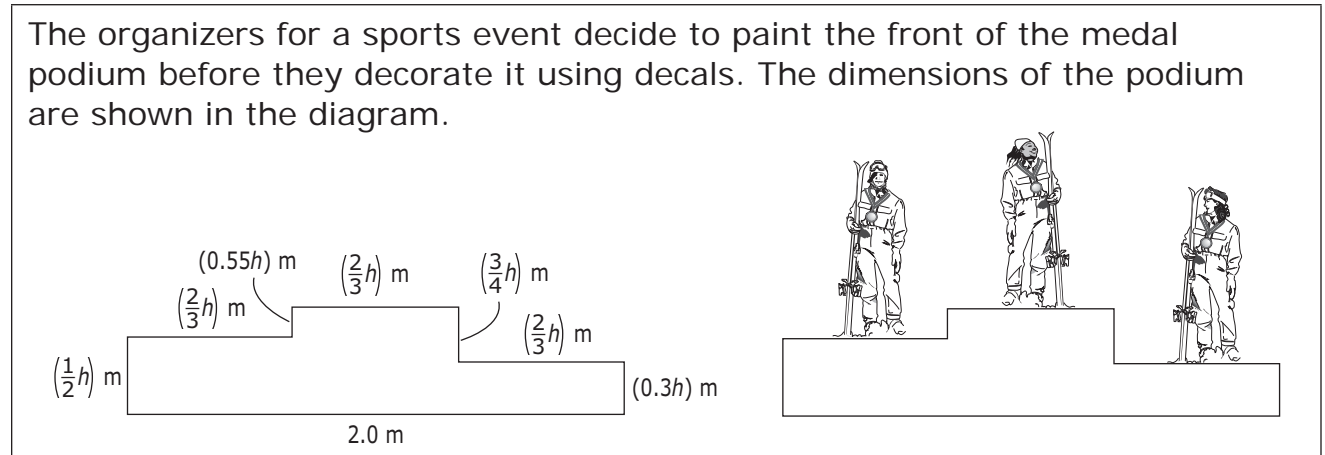


MathLinks 9 Option 2

Final Exam Written Response

Write your response in the space provided. Present your response in a well-organized way using complete sentences and correct units.

Use this information to answer #1.



1. a) Write and simplify an expression for the surface area of the front of the podium in terms of h . Show your work.

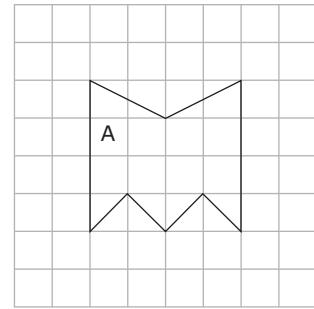
- b) If $h = 1.2$, determine the surface area that needs to be painted, to the nearest hundredth of a square metre.

- c) A can of specialty paint covers 0.8 m^2 . How many cans will be needed? Justify your work mathematically.

Name: _____ Date: _____

Use this information to answer #2a)–c).

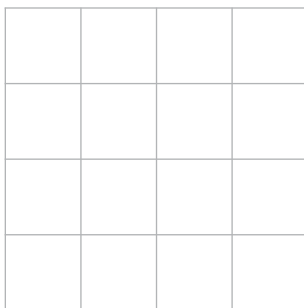
Shane is trying to decide on the dimensions of a logo he designed for a post card that promotes tourism in his community.



2. a) Use a scale factor of 1.5 to draw an enlargement of the logo. Label the image B.



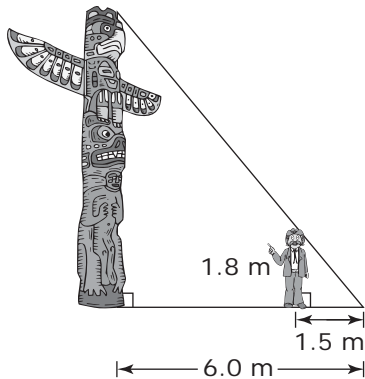
- b) Use a scale factor of 0.5 to draw a reduction of logo A. Label the image C.



Name: _____ Date: _____

c) Which version of the logo would you recommend for a postcard? Explain your choice.

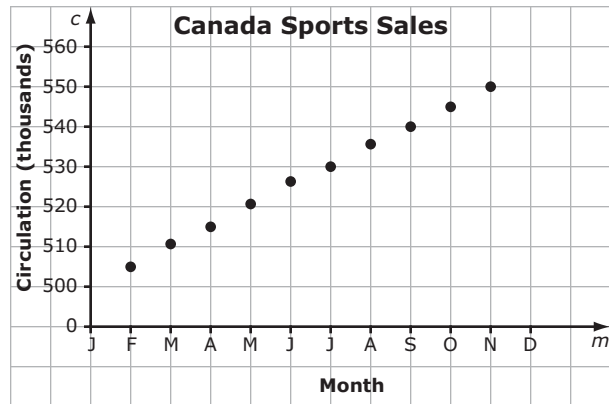
d) Shane wants to promote a local totem pole on his tourism tour. He needs exact measurements of the totem pole. The totem pole casts a shadow that is 6.0 m long. Shane's shadow casts a shadow that is 1.5 m long. What is the height of the totem pole, to the nearest metre? Show your work.



Name: _____ Date: _____

Use this information to answer #3.

A magazine called Canada Sports highlights Canadian professional and amateur athletes. The graph shows that during the year of the Olympic Games, magazine sales increased at a constant rate.








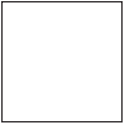
3. a) What was the approximate circulation for June?
- b) Is it reasonable to interpolate or extrapolate values on this graph? Explain.
- c) What linear equation does the graph represent? Identify the variables you use.

Name: _____ Date: _____

- d)** Determine the mean circulation for the year shown on the graph. Justify your work mathematically.
- e)** Predict what you think will happen to the mean circulation in the coming year. Explain your thinking.
- f)** A magazine stand owner surveyed his customers and determined that 17% of them purchase Canada Sports. In one day, 322 people bought a magazine at the stand. Based on the survey, how many people bought Canada Sports? Justify your thinking.

Name: _____ Date: _____

Use these algebra tiles to answer #4a).

 = positive 1-tile  = negative 1-tile
 = positive x-tile  = negative x-tile
 = positive x^2 -tile  = negative x^2 -tile

4. a) Write the expression represented by the algebra tiles.

b) Simplify the expression in part a).


c) Write a trinomial that satisfies the following conditions:

- contains only one variable
- is of degree two
- has a constant term greater than 5

d) Use algebra tiles to model your trinomial in part c).

Name: _____ Date: _____

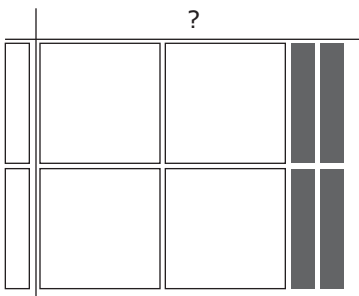
Use these algebra tiles to answer #4e).



Shaded tiles are positive and white tiles are negative.

e) What multiplication statement is represented by the algebra tiles?

Use these algebra tiles to answer #4f).



Shaded tiles are positive and white tiles are negative.

f) Write the division statement represented by the algebra tiles.
Then, simplify.