

## Intermediate Mathematics Provincial Assessment 2007

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ MI: \_\_\_\_\_

Teacher: \_\_\_\_\_

School Name: \_\_\_\_\_ School District: \_\_\_\_\_

### IMPORTANT

You will have to complete your name and school information in four places:

- (1) On Section 1 and 2
- (2) On the bubble sheet
- (3) On the cover of your Student Booklet

**Please ensure the information in each of these places is completed correctly and clearly. Your bubble sheet will be placed inside the Section 1 Insert for mailing so pay particular attention that the bubble sheet and Insert information are correct.**

### Section 2: Written Response Questions

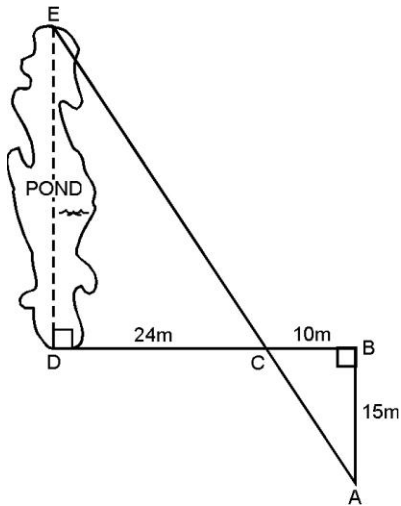
You will need a pencil, paper, and ruler for this section. You are permitted the use of a calculator.

Questions, 8-11 require you to write, draw, or graph your responses in the space provided in this booklet. Do not use your bubble sheet for these questions. Section 2 should take about 20 minutes.

Your teacher will collect Section 2 when everyone is finished and will then give you Section 3 (a larger work booklet containing the rest of the questions). You will need your bubble sheet for Section 3.

**Section 2 Insert**

8. Look at the diagram below.



a) Which triangles are similar?

b) Explain why the triangles are similar.

---

---

---

---

c) Use your knowledge of similar triangles to create and solve an equation to determine the distance across the pond from D to E.

9. Your school is planning a field trip to Gros Morne National Park. The cost of the trip is a flat fee of \$500 plus \$50 per student.

a) Complete the table below.

Table A:

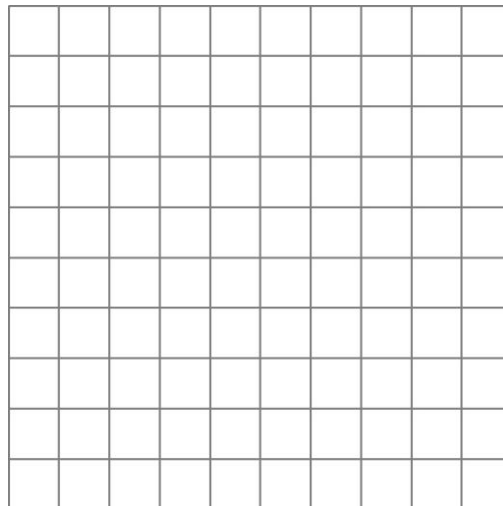
Number of Students	0	2	4	6	8
Cost of Trip					

b) If the total cost of the trip was \$1250, write and solve an equation to determine the number of students who went on the trip.

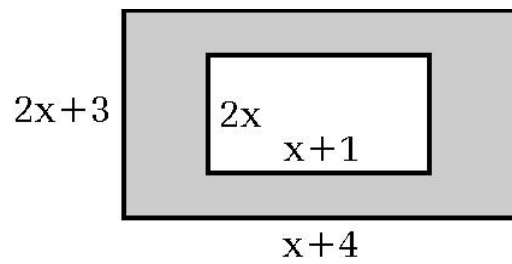
$c$  = cost of the trip

$n$  = number of students


c) Graph the information from Table A and extend the graph to confirm your answer in (b). Label your graph.



10. The shaded region represents a picture frame. Find an expression for the area of the shaded region in simplest form.





11. A spherical scoop of ice cream, as shown  , melts into a cone. The sphere had a radius of 3 cm. The cone has a radius of 3 cm and a height of 10 cm.



Will the melted ice cream fit into the cone or will it overflow the cone?

Explain your answer using numbers and words.