Intermediate Mathematics
Provincial Assessment 2008

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.

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.

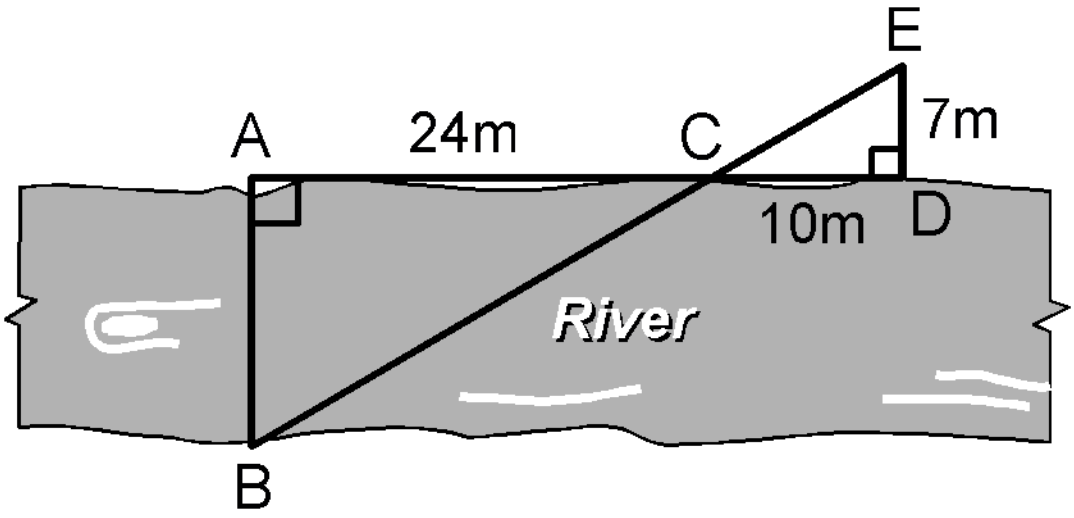
Section 2 Insert

Formulas

Volume of a Cone:	$V = \frac{1}{3}\pi r^2 h$
Volume of a Sphere:	$V = \frac{4}{3}\pi r^3$
Volume of a Cylinder:	$V = \pi r^2 h$
Surface Area of a Sphere:	$SA = 4\pi r^2$
Surface Area of a Cone:	$SA = \pi r^2 + \pi rs$

Please note that all formulas may not be needed on any given assessment.

8. John drew similar triangles to find the distance across a river, AB.



a) Write a similarity relation

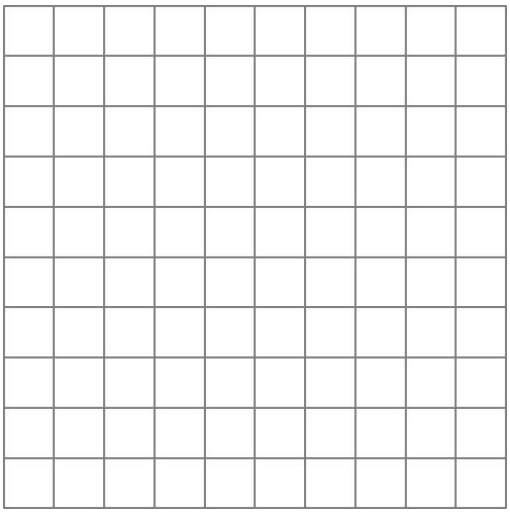
b) Create and solve an equation to determine the distance across the river.

___ out of 3 marks

9. Water was heated for 4 minutes with the temperature being recorded every 1 minute.

Time (minutes)	Temp. (°C)
0	18
1	21
2	24
3	27
4	30

a) Plot the data from the table and draw a graph.

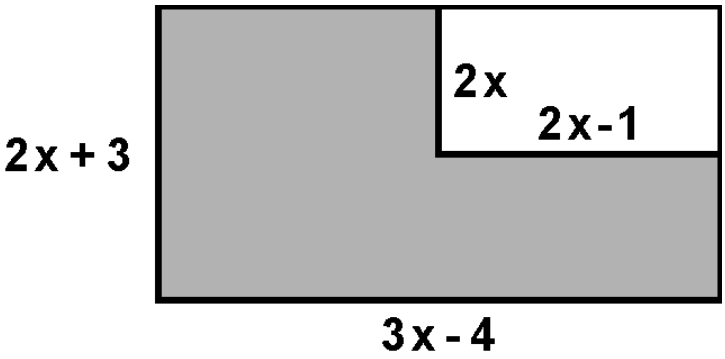


b) Calculate the slope of the graph above.

c) What is the y-intercept and what does it represent?

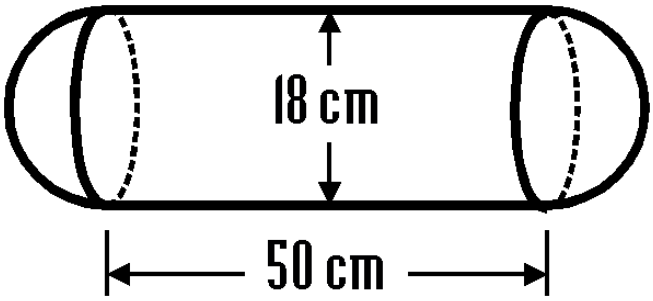
___ out of 3 marks

10. Determine the area of the shaded region for the figure shown in simplest form.



___ out of 3 marks

11. Your class is filling a time capsule. Its ends are semi-spherically shaped. How much can the time capsule hold (to the nearest cm^3)?



___ out of 3 marks