

Welcome to
Mr. Amory Wong's
FOMP 10 Class!

WORK and education



- Electronic Arts – 20 years
- PlayLand, 7-Eleven, Moki's Pizza, and more
- SFU Bachelors of Math and Computing Science
- SFU Bachelors of Education
- Douglas College, UBC, Langara College, VVI



Personal

- Family guy
- Farming
- Sports
- Math and Computer
- Creating and Fixing





Philosophy

- Professional
- Caring
- Collaborative
- Patient
- Innovative

keep on track and study

year's class?

Don't try to do ^{all} the works at the end.

Never be lazy.

Students' Advice

- Ask questions in class.
Se

What advice would you give to next year's class?

don't stress too much, don't fall behind schedule and just try your best

What advice would you give to next year's class?

DO YOUR HOMEWORK!
ASK FOR HELP!!!
Review / Study / Practice
DON'T GIVE UP

What advice would you give to next year's class?

stick with the schedule or ahead of it

- show Mr. Wong your homework (early marks)

watch Mr Wong's videos and have a study partner for tests

don't fall behind, go in for extra help do the Review packages!

don't fall behind and do the videos and bonus things because it really helps your mark.

our marks fair (why or why not)?

Yes, really appreciate the bonus marks

I would say so

Yes. He gives life lines and extensions

yes

yes

Fairness

Yes

yes, It's fair.

yes he was I think that he was very reasonable.

yes, he was always on our side

Yes, he helped you improve if you wanted to

yes, you are too kind

Yes. We had lots of chances to improve our marks.

very fair, most concepts have been taught well, and the CEMC videos also helped

Yes because he gave us alot of chances to improve our marks and to learn better

no

No!

No

no


Was Mr. Wong Scary?

Yes ~~because Mr. Wong~~ bc I didn't know Mr. Wong
No because I know his teaching better.

kinda at the beginning, I'm not sure why. By the end of the year that wore off.

yes at the start, I felt that he may judge me if I got an answer wrong. I am not anymore
Would you want Mr. Wong as a teacher again (also give a letter grade if you like)?

no, because I had been taught by him in the past



Classroom Procedures for Teacher and Students

to create a positive learning environment for all!

Teacher Responsibilities

- Prepared
- Help
- Available
- Respect students
- Fun

Student Responsibilities

- Prepared
- Participate
- Responsible
- Respect
- No cell phones or computers for non-course related use

Lesson Format

- Lectures
 - Fill in notes template
 - Do work in-class
 - Complete the work at home if necessary
 - Will not teach you how to solve every case
- You may choose to go faster by watching video lessons
 - However, you should still try to listen to lectures to get extra material
- Check your answers! Ask questions if you can't get it right.

Big Ideas (New Curriculum)

- Number represents and describes quantity.
- Developing computational fluency comes from a strong sense of number.
- We use patterns to represent identified regularities and form generalizations.
- We can describe measure, and compare spatial relationships.
- Analyzing data and chance helps us to compare and interpret.

Course Outline

- Chapter 4 – Exponents and Radicals
- Chapter 1 – Measurement Systems
- Chapter 2 – Surface Area and Volume
- Chapter 5 – Polynomials
- Chapter 6 – Linear Relations and Functions
- Chapter 7 – Linear Equations and Graphs
- Chapter 8 – Solving Systems of Linear Equations Graphically (PC11)
- Chapter 9 – Solving Systems of Linear Equations Algebraically (PC11)
- Chapter 3 – Right Triangle Trigonometry
- New Curriculum – probability, statistics, finance (income, taxes and deductions), tessellations (MA8)
- Semantics
- Learn to make notes

MYP Aims for Mathematics

- enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- communicate clearly and confidently in a variety of contexts
- develop logical, critical and creative thinking
- develop confidence, perseverance, and independence in mathematical thinking and problem-solving
- develop powers of generalization and abstraction
- apply and transfer skills to a wide range of real-life situations, other areas of knowledge and future developments
- appreciate the contribution of mathematics to other areas of knowledge
- develop the ability to reflect critically upon their own work and the work of others.

Homework (Work)

- Since also in-class, we'll say "Work"
- Assigned work is "Level 5" to "Level 6"
- Challenge work is "Level 7" to "Level 8"
- No marks. However, it is used to determine ATL's

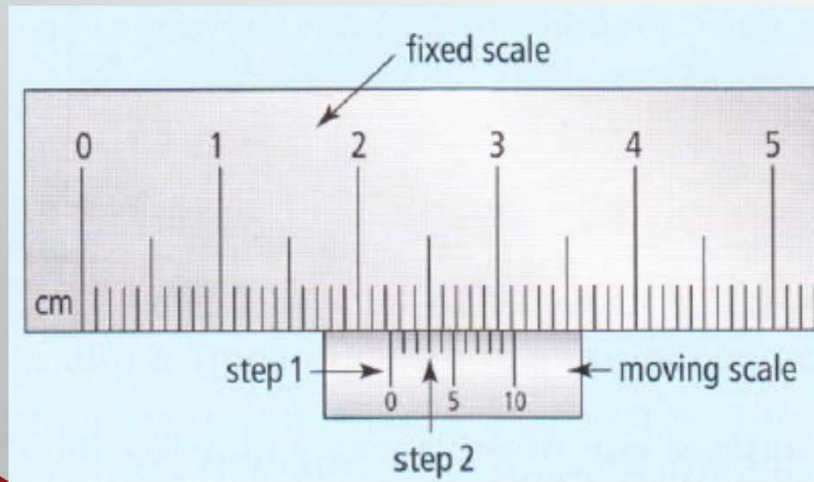
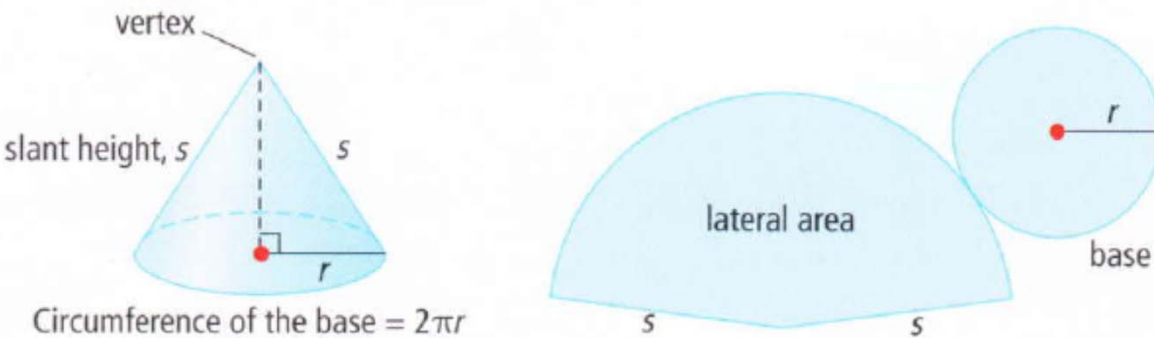
Assessment

- Tests are level tests using Criteria A and C.
- Inquiry will be before lectures, Criteria B.
- Project Assignments will be done after tests, Criteria D.
- Marks will be computed with levels and recorded on ManageBac.
- 2 handwritten reference sheets (4 sides) permitted on tests
- No Provincial Exam, however, Skills Test needed to graduate
- No cell phones for tests

Calculators

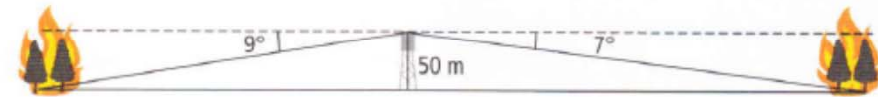
- Recommend TI-30XS Multiview (\$18 Staples), Casio fx-300ES PLUS (\$12 Staples/Costco)
- Prefer TI-83, TI-84, Casio fx-9750, or Casio fx-9860
- Learn to use them properly, ask if you're not sure
- Borrowing (post-dated cheque), you are responsible for the batteries
 - TI-83 - \$100 deposit
 - Casio fx-9750 - \$70 deposit

Samples



Example 4 Solve a Problem Using Trigonometry

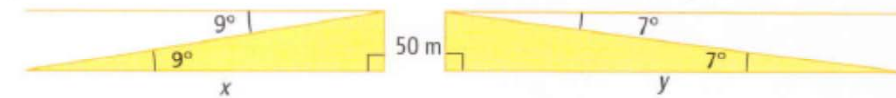
From a height of 50 m in his fire tower near Francois Lake, BC, a ranger observes the beginnings of two fires. One fire is due west at an angle of depression of 9° . The other fire is due east at an angle of depression of 7° . What is the distance between the two fires, to the nearest metre?



Solution

Model the problem using right triangles.

Let x and y represent the lengths of the bases of the triangles.



$$\tan 9^\circ = \frac{\text{opposite}}{\text{adjacent}}$$

$$\tan 9^\circ = \frac{50}{x}$$

$$x = \frac{50}{\tan 9^\circ}$$

$$x = 315.687\dots$$

Use the given angles to find the measure of one acute angle in each right triangle.

$$\tan 7^\circ = \frac{\text{opposite}}{\text{adjacent}}$$

$$\tan 7^\circ = \frac{50}{y}$$

$$y = \frac{50}{\tan 7^\circ}$$

$$y = 407.217\dots$$

Samples

Example 3 Apply Powers With Rational Exponents

Food manufacturers use a beneficial bacterium called *Lactobacillus bulgaricus* to make yoghurt and cheese. The growth of 10 000 bacteria can be modelled using the formula $N = 10\,000(2)^{\frac{h}{42}}$, where N is the number of bacteria after h hours.

- What does the value 2 in the formula tell you?
- How many bacteria are present after 42 h?
- How many more bacteria are present after 2 h?
- How many bacteria are present after 105 h?



Solution

- The value 2 indicates that the number of bacteria doubles every 42 h.
- Substitute the value $h = 42$ into the formula and evaluate.

$$N = 10\,000(2)^{\frac{42}{42}}$$

$$N = 10\,000(2)^1$$

$$N = 20\,000$$

There are 20 000 bacteria after 42 h.

- First, remove the greatest common factor (GCF). The GCF of the polynomial is 3. Therefore, $24x^2 - 30x - 9 = 3(8x^2 - 10x - 3)$. Use a table to find two integers with

- a product of $(8)(-3) = -24$
- a sum of -10

What signs do the two integers need to have?

Factors of -24	Product	Sum
-1, 24	-24	23
-2, 12	-24	10
-3, 8	-24	5
-4, 6	-24	2
-6, 4	-24	-2
-8, 3	-24	-5
-12, 2	-24	-10
-24, 1	-24	-23

Samples

Example 2 Determine the Equation of a Line Using Two Points

- Use slope-point form to write an equation of the line through $(3, -4)$ and $(5, -1)$.
- Sketch a graph of the line.
- Rewrite the equation in general form, $Ax + By + C = 0$.

Solution

- Points on the line are given. So, you need to determine the slope. Use the two given points, $(3, -4)$ and $(5, -1)$.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

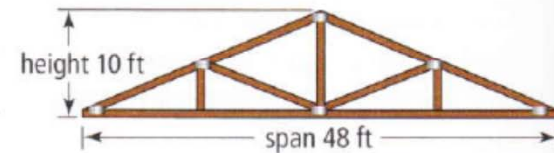
$$m = \frac{-1 - (-4)}{5 - 3}$$

$$m = \frac{-1 + 4}{5 - 3}$$

$$m = \frac{3}{2}$$

Example 2 Determine the Value of a Slope

When discussing a roof truss, carpenters refer to the *span* instead of the *width*. They talk about the *pitch* rather than the *slope*. Determine the pitch of the roof supported by the truss shown. Explain the meaning of your answer.



Solution

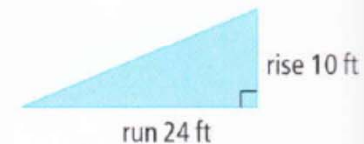
The pitch of the roof is its slope.

$$m = \frac{\text{rise}}{\text{run}}$$

$$m = \frac{10}{24}$$

$$m = \frac{5}{12}$$

How is the run determined?



The pitch of the roof is $\frac{5}{12}$. This means that the roof rises 5 units for every 12 units of horizontal distance.

Samples

Method 2: Isolate the Variable c in ②

$$9a + 6c = 1614$$

$$6c = 1614 - 9a$$

$$c = 269 - \frac{9}{6}a$$

Compare isolating c in Method 2 to Method 1. Why does Method 2 work better?

Substitute for c in ①.

$$a + \left(269 - \frac{9}{6}a\right) = 220$$

$$-\frac{3}{6}a + 269 = 220$$

$$-\frac{1}{2}a + 269 = 220$$

$$-\frac{1}{2}a = -49$$

$$-\frac{1}{2}a(-2) = -49(-2)$$

$$a = 98$$

Substitute a in ① to finish solving the system.

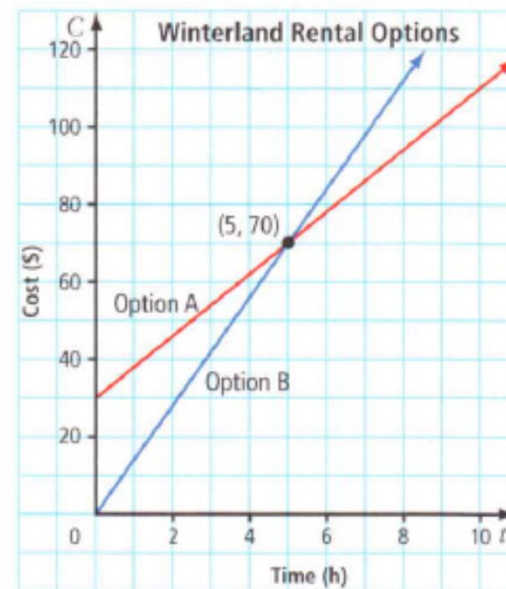
$$98 + c = 220$$

$$c = 122$$

b) To solve the linear system $C = 30 + 8t$ and $C = 14t$, graph the equations together and identify the point of intersection.

Method 1: Use Paper and Pencil

Graph the two equations.



What is the length of rental when both options have the same charge? What is that amount? How would you decide which option is better for you?

From the graph, the point of intersection is $(5, 70)$. This is the solution to the linear system. It represents the length of rental when both options have the same charge.

Don't be Just Another Student

- CG Scholarships and Bursaries
- Reputation
- Not just academics
- Talk to teachers
- Join clubs or teams
- Enter contests (math, physics, others)
- Not only for school

Cheating

- Copying other people's work
- Letting other people copy your work
- Having other people do your work
- Doing other people's work
- A mark of zero may be assigned
- Parents may be notified
- Could end up on your school record
- Could impact your ability to get scholarships and bursaries



Questions?