

ALBERTA DISTANCE LEARNING CENTRE

Mathematics 10C

MAT1791

Unit 1 Final Review Workbook

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Unit 1 Final Review Assignment		22	

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Unit 1 Final Review Workbook

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Unit 1 Final Review Workbook Measurement

Unit 1: Measurement Final Review Assignment



Final Review Assignment

- ② 1. Dale has measured a stick to be 122 cm and plans to use it as a referent. Describe one advantage and one disadvantage of Dale's referent.

- ② 2. a. Explain how to choose an appropriate unit for a measurement.

- b. Pick an appropriate SI and imperial unit for each of the following measurements.

- i. The volume of a drinking glass
- ii. The dimensions of an optical disc case
- iii. The mass of a vehicle

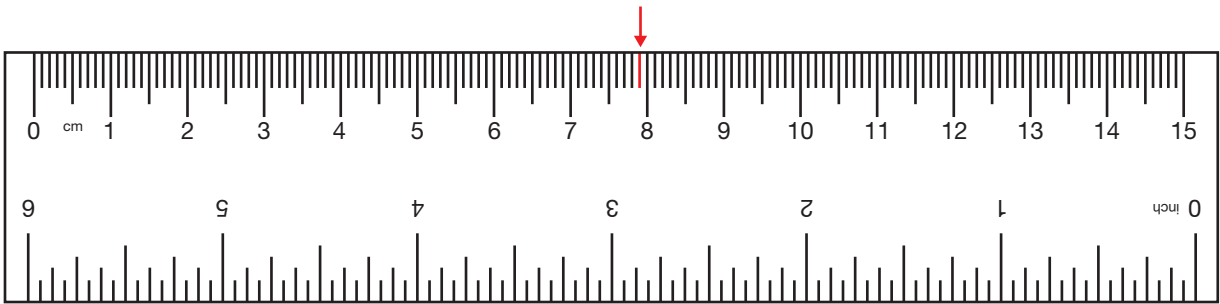
3. To estimate the perimeter of a field, Nyah walked 10 steps, measured the distance, and divided that distance by 10 to get an average step length of 80 cm. She then proceeded to walk the field counting her steps. Partway around the field, she realized that she had an appointment soon so she jogged around the remainder of the field, still counting her steps. In total, she had 521 steps so she preformed the following calculations.

$80\text{ cm} = 0.8\text{ m}$
 $0.8\text{ m} \cdot 521 = 416.8\text{ m}$

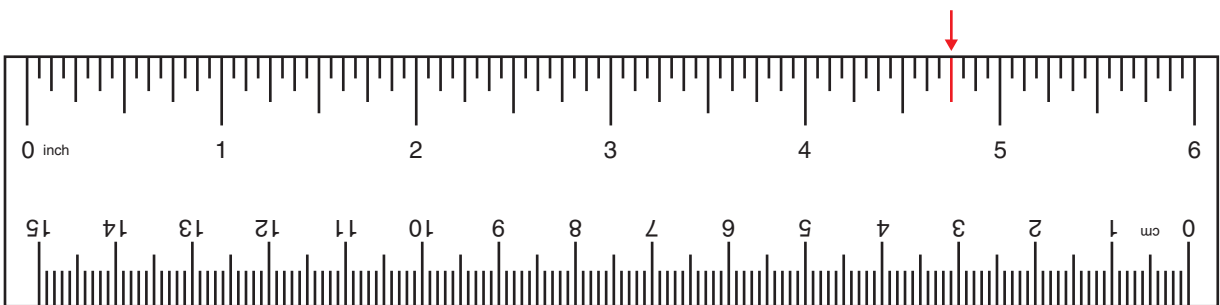
Comment on Nyah’s estimation procedure.

4. State the measurement indicated in each of the following diagrams.

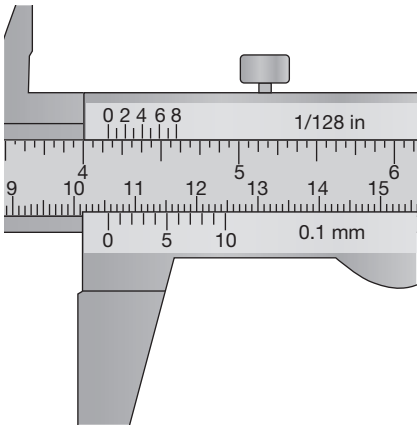
a.



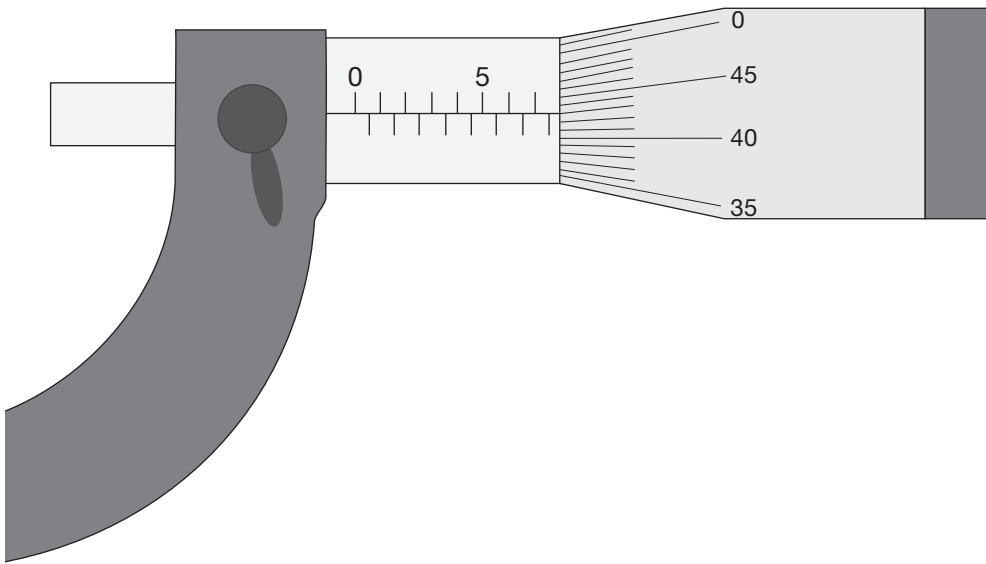
b.



c.



d.



- ② 5. Explain why the decimal moving strategy can be used with SI units, but not with imperial units.

④ 6. Complete the following unit conversions.

a. $225 \text{ cg} = \underline{\hspace{2cm}} \text{ hg}$

b. $2\,520 \text{ pounds to tons}$

c. $41 \text{ feet to yards, express the answer as a mixed fraction}$

d. $19 \text{ inches into metres}$

- ② 7. Harriet attempted to convert 7 miles into kilometres. Explain her error and then provide a correct conversion.

There is one kilometre for every 0.621 miles so $7 \text{ mi} \cdot 0.621 \text{ mi/km} = 4.347 \text{ km}$.

- ④ 8. The Eastern Alberta DC Transmission Line is a project that began construction in 2012. It includes a 500 km, 500 kV power line from the Brooks area to the Edmonton area. (The V stands for “volts”, an SI unit for electrical potential.)

a. Suppose the towers supporting the line are 1.5 km apart. How many towers would be required to complete the project?

b. A rechargeable AA battery produces approximately 1.2 volts. How many times larger is the voltage in the power line than that of the battery?

- ② 9. Wrench sets designed for SI bolts often include wrenches at 1 mm increments while wrench sets designed for imperial bolts often include wrenches at $\frac{1}{16}$ " increments. With only a metric wrench set on hand, which metric wrench would best fit a $\frac{5}{8}$ " bolt?

Unit 1: Measurement



Unit Checkpoint

Use the *Check Point* to check and reflect before completing the *Test Your Understanding Quiz* for *Unit 1: Measurement*.

I understand how to:

Unit 1 Concepts	Place a checkmark in the appropriate column		
	Yes	No	Maybe
Provide referents for linear measurements using SI and imperial units			
Estimate a length using a referent			
Choose an appropriate unit for solving a measurement problem			
Use various tools for measuring lengths and distances			
Describe how to measure the length or perimeter of an oddly shaped object			
Convert between SI units			
Convert between imperial units			
Convert between SI and imperial units			
Explain how units are eliminated in a unit conversion			
Use mental mathematics to justify the reasonableness of a conversion			

If you have any concerns from the *Check Point*, please refer to *Enhance Your Understanding* in the *Module* for designated practice questions and their solutions to help you improve your skills.

Contact your teacher for assistance and clarification as needed.

You have completed the *Lessons* and *Workbooks* for *Unit 1: Measurement*. Please review all work in *Unit 1 Final Review Workbook* to ensure it is your best work. Submit *Unit 1 Final Review Workbook* for marking at this time and continue your training with the next unit, *Unit 2: Surface Area and Volume*.

Complete the *Test Your Understanding Quiz* when you have reviewed the feedback provided by your marker for *Workbooks 1.1, 1.2, 1.3, 1.4, 1.5, and Unit 1 Final Review*.

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