ALBERTA DISTANCE LEARNING CENTRE
Mathematics 10C
MAT1791
Workbook 7.3

Student's Questions and Comments

FOR STUDENT USE ONLY

Student Name:

_____

FOR ADLC USE ONLY

Assigned to

_____

Marked by

_____

Date received

_____

Summary

	Marks Earned	Total Possible Marks	Percent
7.3 Practice – III	**I have _____ /8 and _____ %.**		
Lesson 7.3 Assignment		12	

Teacher's Comments:

_____

Teacher's Signature

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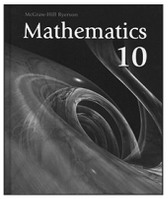

Mathematics 10

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Practice Assessment

The *Practice* section provides exercise questions and allows you to self-reflect on your conceptual understanding of the *Lesson* skills. You will mark your *Practice* work in each *Workbook* according to the following rubric.

Category	Strategy and Procedures	Response to Questions
	I have…	*I have…*
4	• used efficient and effective strategies to solve the problem(s)	• provided detailed explanations and followed directions appropriately to complete all questions
3	• used effective strategies to solve the problem(s)	• provided clear explanations and followed directions adequately to complete most questions
2	• used effective strategies inconsistently to solve the problem(s)	• provided incomplete explanations and followed some directions to complete a few questions
1	• used ineffective strategies to solve the problem(s)	• provided incomplete explanations and have not followed directions to complete some questions

Complete *Practice* exercises using your best work, showing all relevant steps needed to arrive at your solution. Refer to the *Module* to review lesson instructions. Contact your teacher for assistance or clarification as needed, or to investigate the topic further.

Check and correct your work using the solutions provided in *Appendix* in the *Module*.

Practice is worth 8 marks.

After you have assessed your work, reflect on your understanding of the concepts in the table provided at the end of each *Practice* section.

Lesson 7.3: Slope-Point Form of a Linear Equation

Complete the *Practice* below. When you have completed all the questions for *Lesson 7.3 Practice – III* with your best work, mark your work by first comparing your answers to the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

Practice – III

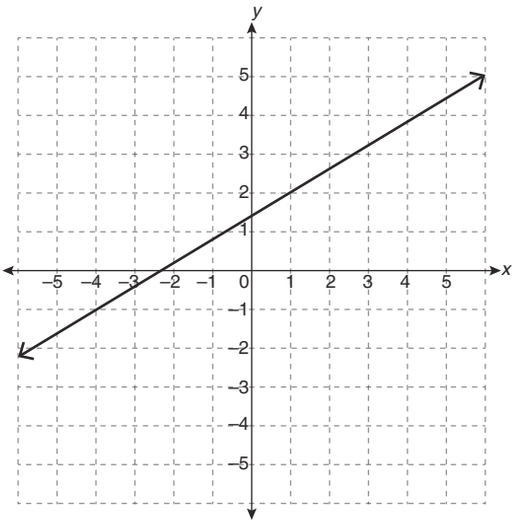
1. Convert the equation $y-5=-\frac{3}{8}(x-12)$ into

   a. slope-intercept form

   b. general form

2. A line passes through the points $(-5,-5)$ and $(19,-3)$. Determine the equation of this line, in slope-point form.

3. State two different equations in slope-point form that represent the graph of the relation shown.



4. The graph of a linear relation has a slope of 16.5 and an x-intercept of 121. Determine the y-intercept.

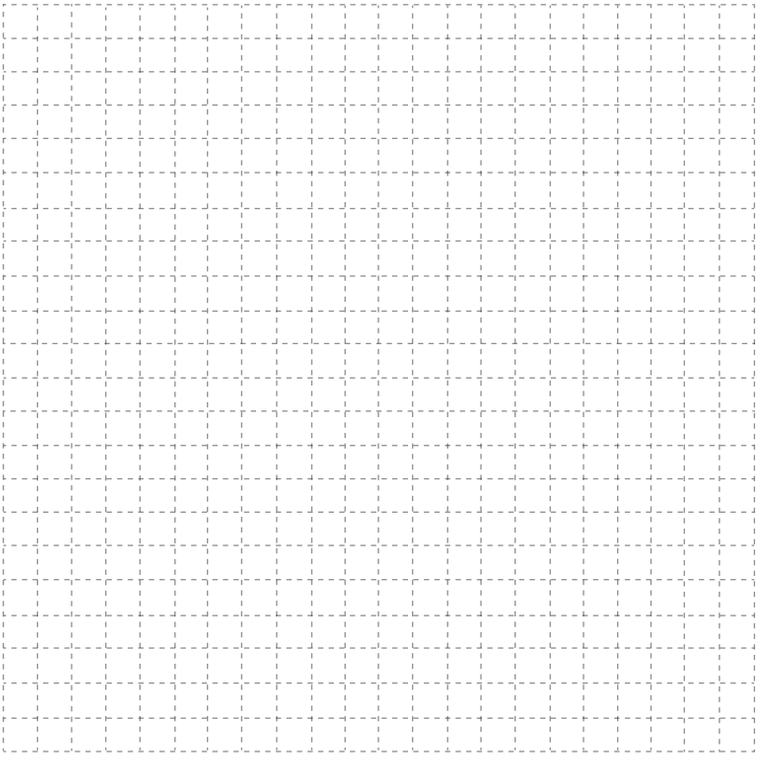
5. While planning a trip to Europe, Brian and Donna exchanged some Canadian dollars for euros. Brian bought €300 for $430 and Donna bought €450 for $640 from a merchant who uses a linear relation to calculate the rate.

   a. Let x represent the euros purchased and let y represent the cost, in Canadian dollars. Determine the slope of the graph of the relation.

   b. What does the slope represent in this scenario?

   c. Write a currency exchange equation in slope-point form.

d. Graph the relation represented by the currency exchange equation.

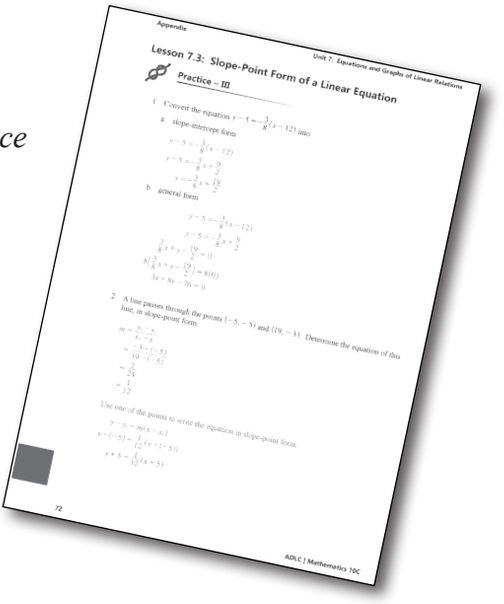


e. The merchant charges a service fee for each exchange. What characteristic of the graph represents the service fee? What is the service fee?

Mark your work for *Lesson 7.3 Practice – III* using the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

Transfer your self-assessed mark to the front cover of the *Workbook*.

My self-assessed mark on *Lesson 7.3 Practice – III* is _____.


Appendix

Unit 7: Equations and Graphs of Linear Relations

Lesson 7.3: Slope-Point Form of a Linear Equation

Practice – III

1. Convert the equation $y-5=-\frac{3}{8}(x-12)$ into

a. slope-intercept form

$y-5=-\frac{3}{8}(x-12)$

$y-5=-\frac{3}{8}x+\frac{9}{2}$

$y=-\frac{3}{8}x+\frac{19}{2}$

b. general form

$y-5=-\frac{3}{8}(x-12)$

$y-5=-\frac{3}{8}x+\frac{9}{2}$

$\frac{3}{8}x+y-\frac{19}{2}=0$

$8\left(\frac{3}{8}x+y-\frac{19}{2}=8(0)\right.$

$3x+8y-76=0$

2. A line passes through the points $(-5,-5)$ and $(19,-3)$. Determine the equation of this line, in slope-point form.

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

$=\frac{-3-(-5)}{19-(-5)}$

$=\frac{2}{24}$

$=\frac{1}{12}$

Use one of the points to write the equation in slope-point form.

$y-y_1=m(x-x_1)$

$y-(-5)=\frac{1}{12}(x-(-5))$

$y+5=\frac{1}{12}(x+5)$

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Reflect on your understanding of the concepts addressed in the *Practice* exercises in the table provided.

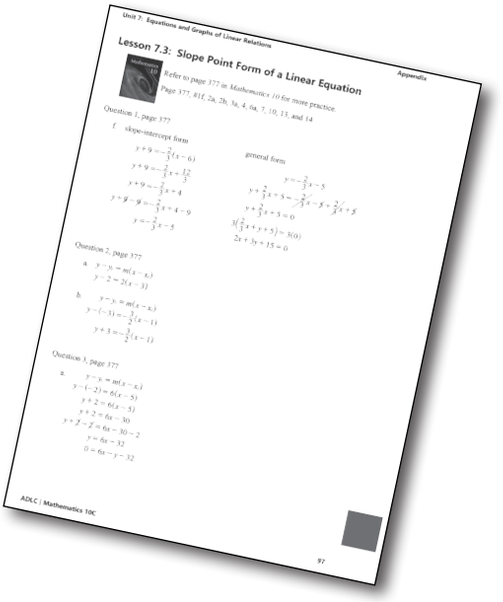
Question Number	Got it!	Almost there…	Need to retry or ask for help.
1			
2			
3			
4			
5			

You may proceed to *Explore Your Understanding Assignment* on the next page of this *Workbook.*

Note: Before you complete *Explore Your Understanding*, you may review your skills and get more practice by completing the following problems in *Mathematics 10*.

- Page 377, #1f, 2a, 2b, 3a, 4, 6a, 7, 10, 13, and 14

Check your work in *Enhance Your Understanding*.


Unit 7: Equations and Graphs of Linear Relations

Lesson 7.3: Slope Point Form of a Linear Equation

Appendix

Refer to page 377 in *Mathematics 10* for more practice.

Page 377, #1f, 2a, 2b, 3a, 4, 6a, 7, 10, 13, and 14

Question 1, page 377

f. slope-intercept form

$y+9=-\frac{3}{8}(x-6)$

$y+9=-\frac{3}{8}x+\frac{32}{8}$

$y+9=-\frac{3}{8}x+4$

$y+9-9=-\frac{3}{8}x+4-9$

$y=-\frac{3}{8}x-5$

general form

$y=-\frac{3}{8}x-5$

$y+\frac{3}{8}x+5=-\frac{3}{8}x-5+\frac{3}{8}x+5$

$y+\frac{3}{8}x+5=0$

$8\left(\frac{3}{8}x+y+5\right)=8(0)$

$3x+8y+40=0$

Question 2, page 377

a. $y-y_1=m(x-x_1)$

$y-2=2(x-3)$

b. $y-y_1=m(x-x_1)$

$y-(-3)=-\frac{3}{2}(x-1)$

$y+3=-\frac{3}{2}(x-1)$

Question 3, page 377

a. $y-y_1=m(x-x_1)$

$y-(-2)=6(x-5)$

$y+2=6(x-5)$

$y+2=6x-30$

$y+2-2=6x-30-2$

$y=6x-32$

$0=6x-y-32$

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Lesson 7.3: Slope-Point Form of a Linear Equation

Explore Your Understanding Assignment

(2) 1. State the slope and a point on the line $y - 18 = 71.3(x + 98)$.

(2) 2. Sketch a graph of the relation $y + 4 = 2(x - 3)$. Explain the procedure used.

(1) 3. Write an equation for a line that passes through the point (4, 9) and has a slope of 16.

(2) 4. Explain why $y + 1 = 1.2(x + 2)$ and $y - 5 = 1.2(x - 3)$ represent the same line, despite having different equations.

5. In water, the greater the depth, the higher the pressure. For every 10 m increase in depth, water pressure increases by about 100 kilopascals (kPa). At a depth of 40 m, the pressure is approximately 500 kPa.

(1) a. State the independent and dependent variables in this scenario.

(1) b. What is the rate of change in this relationship?

(1) c. Write the equation of a linear relation representing the pressure, p, at a depth, d, under water.

(1) d. What is the pressure at a depth of 100 m?

(1) e. At what depth will the pressure be 725 kPa?

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