

Mathematics 10 F&PC

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Textbook

This course uses the textbook " *Mathematics 10* " ISBN 9780070002470 • 0070002479

by McGraw Hill Ryerson. 1-800-565-5758 Price is about \$ 85.

Curriculum Outline

Chapter 1 Measurement Systems	Chapter 2 Surface Area and Volume	Chapter 3 Right Angle Trigonometry
Chapter 4 Exponents and Radicals	Chapter 5 Polynomials	Chapter 6 Linear Relations and Functions
Chapter 7 Linear Equations and Graphs	Chapter 8 Solving Systems of Linear Equations Graphically	Chapter 9 Solving Systems of Linear Equations Algebraically

Structure

This course is generally designed with the self-paced student in mind. It is based on a mastery system in which the student must obtain an 80% on the tests. Each chapter has two versions in which the student has a chance to reach and or exceed the 80% mastery level.

Evaluation

There are 9 chapter tests which account for 70% of the final mark. There are 4 cumulative tests which account for 30% of the final mark.

Composition

The course is made up of:

9 Chapters Outlines,

9 Chapter Tests each with an A and a B version (18 tests), Plus (18 tests) Answer Keys

4 Cumulative Tests, Plus (4 Cumulative Tests) Answer Keys,

All Answer Keys have a suggested marking scheme,

All files are put on disk in pdf and MS Word,

A perpetual license for your school.

The entire paper course is placed in a binder along with the disk and shipped as one unit.

Cost: \$ 450.00. See Ordering on website

Math 10 F&PC**Record Chart**

Name:		Start Date:			
Chapter	Topic	Test A	Test B	Average	Date
1	Measurement Systems				
2	Surface Area and Volume				
3	Right Angle Trigonometry				
Cumulative Test					
4	Exponents and Radicals				
5	Polynomials				
Cumulative Test					
6	Linear Relations and Functions				
7	Linear Equations and Graphs				
Cumulative Test					
8	Solving Systems of Linear Equations Graphically				
9	Solving Systems of Linear Equations Algebraically				
Cumulative Test					

Course Evaluation

Course Evaluation	Total Marks	Out of	Percent	Value	Result
Tests (9)		360		70%	
Cumulative Tests (4)		220		30%	
Final Mark					

Math 10 Foundations and Pre-calculus

Textbook: Mathematics 10 by McGraw-Hill Ryerson

Chapter 6 Linear Relations and Functions

Goal: The goal of this chapter is to familiarize you with linear relations and functions.

Objectives: During this unit you will focus on the characteristics of graphing linear relations and functions. You will work with function notation and use slope to solve problems. You will encounter terms such as:

Linear and non linear relations, continuous and discrete data, dependent and independent variable, domain and range, function notation, the vertical line test for functions, and slope.

What Needs to be Done:

Chapter 6 has 5 sections: 6.1, 6.2, 6.3, 6.4, 6.5. Each section in chapter six has an accompanied video to enhance your understanding of the section material. There may be more than one video for a section.

Use the section-numbered videos below as they correspond in the **Chapter Practice Guide** below to help you with your understanding.

Video Selections:

6.1 <https://www.youtube.com/watch?v=VeZ91YIGvDg>

Graphing Relationships (10:56 min)

6.2 <https://www.youtube.com/watch?v=qPx7i1jwXX4> Exploring Linear Relationships. (5 min)

6.3 <https://www.youtube.com/watch?v=C6F33Ir-sY4> Domain and Range (3min 36 sec)

6.4 <https://www.youtube.com/watch?v=VhokQhjl5t0> Introduction to Functions (9 min 32 seconds)

6.5 <https://www.youtube.com/watch?v=hXP1Gv9IMBo> Slope. (8 min 27 secs)

Chapter 6 Practice Guide:

(Check Mark as You Complete)

✓	Page	
<input type="checkbox"/>	268-270	Read over these pages. Watch video 6.1 Graphing Relationships
<input type="checkbox"/>	271-273	Read over and work through the examples.
<input type="checkbox"/>	274-278	Do the practice and apply questions, correcting your work as you go. Select several questions from the extend and connections sections to expand your skills.
<input type="checkbox"/>	279-281	Read over. Watch video 6.2 Exploring Linear Relationships
<input type="checkbox"/>	282-286	Read and work through the examples.
<input type="checkbox"/>	287-291	Do the practice and apply questions, correcting your work as you go. Select several questions from the extend and connections sections to expand your skills.
<input type="checkbox"/>	292-295	Read over. Watch video 6.3 Domain and Range.
<input type="checkbox"/>	295-301	Read over and work through the examples.
<input type="checkbox"/>	301-304	Do the practice and apply questions, correcting your work as you go. Select several extend and connections questions to expand your skills.
<input type="checkbox"/>	305-306	Read over. Watch video 6.4 Introduction to Functions
<input type="checkbox"/>	306-310	Read and work through the examples.
<input type="checkbox"/>	311-314	Do the practice and apply questions, correcting your work as you go. Select several questions from the extend and connections sections to expand your skills.
<input type="checkbox"/>	315-318	Read over. Watch video 6.5 Slope
<input type="checkbox"/>	319-324	Read and work through the examples.
<input type="checkbox"/>	325-329	Do the practice and apply questions, correcting your work as you go. Select several questions from the extend and connections sections to expand your skills.
<input type="checkbox"/>	330-337	Do the review and practice test. Check your work. Review as needed

Since this course is based on the mastery system, you need to reach 80% in the tests before you can proceed to the next chapter and unit, so review your problems and when you are ready, ask your instructor for the tests.

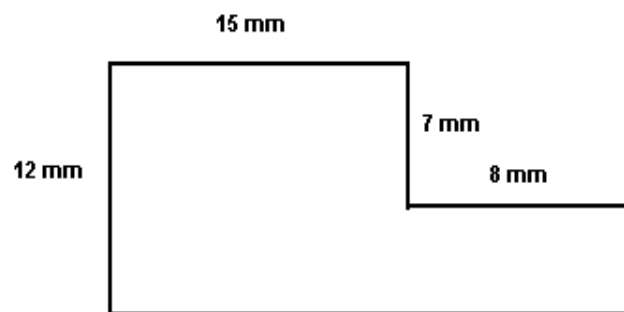
Math 10 F&PC Chapter 1 Test A: Measurement

Name _____ Date _____

40

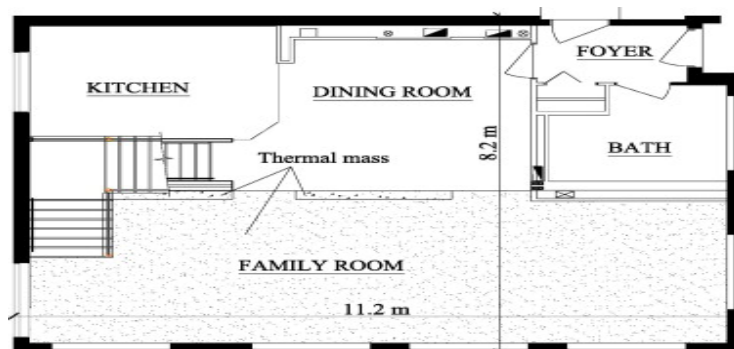
Marks

1. Find the perimeter of the object below.

www.analyzemath.com

2

2. Use the diagram below to answer the questions that follow it.



- a. What is the scale of the diagram?

2

- b. What is the approximate area of the family room, including the stairs, in square metres?

2

3. Consider the width of a typical classroom door:

- a. Use a personal referent to estimate the width of the door. Explain your reasoning.

2

- b. Consider a typical door knob. Use a referent to estimate the width of the knob in S.I. and Imperial units. Explain your choice.

2

4. Describe two referents that could be used to estimate the length and height of a typical minivan. Give one SI unit and one imperial unit that would be appropriate for the measurements of the minivan. Explain your reasoning.

4

5. A piece of paper is $8\frac{1}{2}$ x 11 inches. Find the perimeter of the paper in inches and in centimetres. Find the diagonal length in inches and in centimetres. Suppose the paper comes in packages of 500 sheets 2 inches deep and the packages come in boxes 8 inches deep. What are the dimensions of a box that can hold 16 packages of paper?

3

6. If 1 inch is 25.4 millimeters, how many inches is a 20.34 cm trout?

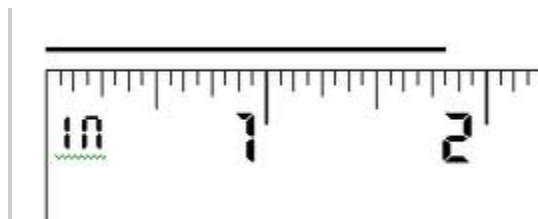


2

7. The formula for circumference is $C = \pi d$. A chef finds a frying pan she is using has a diameter the same as her hand span which she uses as an eight inch referent. What is the approximate circumference of the frying pan?

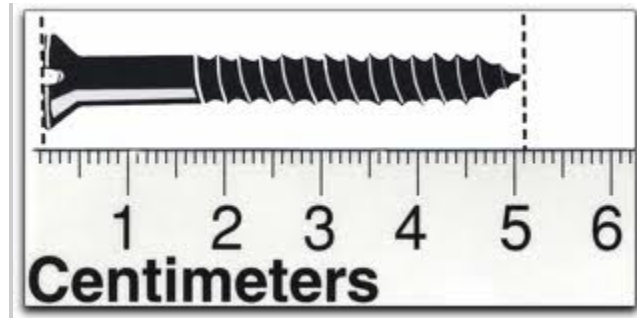
3

8. The ruler below is in inches. Determine the length of the line.



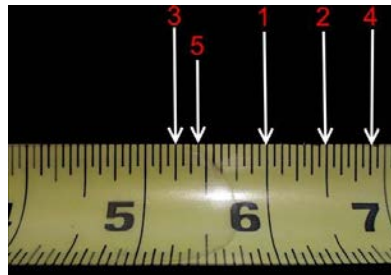
1

10. Determine the length of the fastener.



2

11. Find the length's indicated by the numbered arrows below.



1

1.

1

2.

1

3.

1

4.

1

5.

13. There are 2.2 pounds in 1 kg. How many kilograms is the average watermelon if a 12 melon case weighs 75 pounds?

2

14. The speed of light is approximately 186,000 miles per second. Calculate the following:

a. The approximate speed of light in metres per second

2

b. If the distance to the moon is 384,500 kms, how long would it take a laser beam to travel that distance, bounce off a mirror and return to earth?

2

c. If the speed of sound is 340 metres per second, how much time is there between seeing a lightning strike 10 miles away and hearing the thunder? (1 mile is 5280 feet)

2

15. In baseball, a knuckle ball travels at around 65 miles per hour. A fastball travels about 95 miles per hour. If the ball travels 60 feet, what is the difference between a knuckleball and a fastball in the time the ball takes to travel that distance?

2