M214/M217 Geometry

1.1.2 Review & Preview

1-14. A major focus of this course is learning the **investigative process**, a process you used during the Möbius Strip activity in problems 1-9 through 1-12. One part of this process is asking mathematical questions.

Assume your teacher is thinking of a shape and wants you to figure out what shape it is. Write down three questions you could ask your teacher to determine more about his or her shape. Homework Help ✎

1.

2.

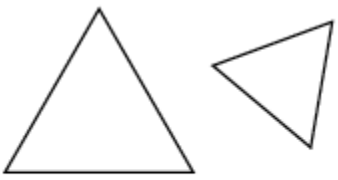
3.

1-15. The shapes below are examples of **equilateral triangles**. How can you describe an equilateral triangle? Examine them and make at least two statements that seem true for all equilateral triangles.

1.

2.

Then trace these equilateral triangles on your paper and draw one more in a different orientation. Homework Help ✎



Examples of Equilateral Triangles

1-16. Match each table of data below with the most appropriate graph and briefly explain why it matches the data. Homework Help ✎

a. Boiling water cooling down.

Time (min)	0	5	10	15	20	25
Temp (°C)	100	89	80	72	65	59

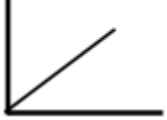
b. Cost of a phone call.

Time (min)	1	2	2.5	3	4	5	5.3	6
Cost (cents)	55	75	75	95	115	135	135	155

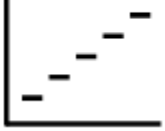
c. Growth of a baby in the womb.

Age (months)	1	2	3	4	5	6	7	8	9
Length (inches)	0.75	1.5	3	6.4	9.6	12	13.6	15.2	16.8

Graph 1



Graph 2



Graph 3

Graph 4

Graph 5

1-17. Solve for the given variable. Show the steps leading to your solution. Check your solution. Homework Help ✎

a. $-11x = 77$

b. $5c + 1 = 7c - 8$

c. $\frac{x}{8} = 2$

d. $-12 = 3k + 9$

1-18. Calculate the values of the expressions below. Show all steps in your process. Homework Help ✎

a. $\frac{3(2+6)}{2}$

b. $\frac{1}{2}(14)(5)$

c. $7^2 - 5^2$

d. $17 - 6 \cdot 2 + 4 \div 2$