Over 4.1, 4.2, 6.1, 6.2, 6.3, 7.1 and some of 6.4 as below

Review for MA 154 Test 1, Thursday, Jan. 30, 2003
A formula sheet will be provided.

1. (7 pts) Recognize the difference between a linear function and an exponential function. Be able to understand what b and m mean in $f(t) = b + mt$
(b = initial amount $t = 0$, m = average rate of change) and what a and b mean in $f(t) = a(b)^t$
(a = initial amount at $t = 0$, b = growth factor.)
Know how to find the percent of growth or percent of decay from b.
See Quiz 1 Problem 1a and Section 4.1 – 7, 15, 16, 20 and 4.2 22, 23

2. (2 pts) Use a graphing calculator to find where two curves intersect., accurate to 0.01.
See Quiz 1 Problem 1b and Section 4.1 – 15, 16

3. (14 pts) Determine the values of the period, amplitude and midline from a sinusoidal graph. Use a graph of $y = f(t)$ to find a given to find a value of y if given a value of t or vice versa. Interpret what these values mean in terms of the context of the problem.
See Quiz 1 Problem 3 and Section 6.1 #7-10, 13

4. (9 pts) Sketch the position of a point corresponding to a given angle and give its coordinates both exactly and approximately. See Quiz 1 Problem 4 and Section 6.2 #1-5, 6, 7, 12

5. (11 pts) If given a point on a circle as determined by an angle q , find coordinates corresponding to $q + p$, $p - q$, etc. Interpret the sine or cosine of these angles as coordinates. See Quiz 1 back of page and Section 6.2 – 16, 17 and 6.3 -- 15, 16, 17, 19

6. (6 pts) Determine in which quadrant an angle lies if given certain conditions. See Ch 6 Review 39ad
7. (7 pts) Find the degree measure of an angle if given certain conditions. See 6.3 #10, 11

8. (5 pts) Understand the relationship between arclength, radius and an angle measure in radians.
Note: $s = rq$ only if q is in radians. See 6.3# 23

9. (6 pts) If given two of the arclength, radius or an angle find the third. See 6.3 #11-14

10. (14 pts) Know exact values of sine and cosine for multiples of 30° , 45° , and 60° and their radian equivalents. See worksheet. Also see 6.4 #15 . More can be found at 6.7 #5, 7, 17. Draw these angles on the unit circle.

11. (9 pts) If given two sides of a right triangle and an angle q , find the third side and find exact values of $\sin q$, $\cos q$, and $\tan q$. See 7.1 #1, 2, 3.

12. (10 pts) Solve applied problems involving right triangles. See 7.1 #6, 7, 8,and 12.

See http://www.ipfw.edu/math/lamaster/courses.htm for handouts, keys, and assignments.