

MTH 135 REVIEW GUIDE FOR TEST 8

In problems (1-4) solve for x.

1.) $3x^2 + 14x - 5 = 0$

2.) $(x - 3)(x+4) = 12$

3.) $5(x-3)^2 = 45$

4.) $2x^2 - 3x = 5$

5.) Find the coordinates of the vertex, x-intercepts and y-intercept of $y = x^2 - 8x + 12$. Draw a rough sketch labeling the points named.

6.) Match the following equations to the graphs below. Assume the scale on each graph is the same.

(i) $y = 5x^2 + 5x$

(ii) $y = -5x^2 + 5x + 2$

(iii) $y = -5x^2 + 5x - 2$

(iv) $y = 5x^2 - 2$

7.) Write a quadratic equation whose solutions are $x = 3$ and $x = -4$.

8.) Write an equation of a parabola whose y-intercept is $(0, 3)$.

9.) A hang glider dives off a cliff and flies with a height given by $h = 100 + 10x - 3x^2$, where x is the number of minutes the glider has been airborne and h is in feet.

a.) When will the glider be 75 feet in the air?

b.) How high is the glider 3 minutes after take off?

c.) What is the maximum height achieved by the glider?

d.) When will the glider land?

e.) How high was the glider at take off?

For numbers 10 and 11 know how to do the story problems in the homework: in the book and on the supplementary handout.