Math 2201: Review Questions Chapter 6

House

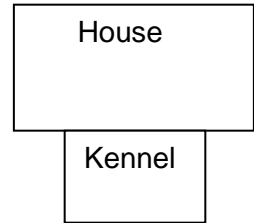| Kennel |
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1. Bruno takes tourists on dogsled rides. He is building
   a kennel on the side of his house for the dogs.
   He has budgeted for 40 m of fence.

a). Write a quadratic function to represent the area of the kennel.

b). What is the maximum area and what are the dimensions of the kennel?

2. Members of a local church hold a fundraiser every Sunday afternoon. They charge
   $6 for a coldpate. They have regularly sold 120 coldplates and they know for every
   $1 increase 10 fewer coldplates will be sold. What should the church members
   charge if they want to raise as much money as they can for the church?

3. A quarterback kicks a ball from the ground. It goes over the goal post and lands on
   the ground 50 ft away. If the ball reaches a maximum height of 20 ft during its
   flight, determine the quadratic function that models this situation and state the
   domain and range.

Vertex	Axis of Symmetry	Direction of Opening
	Y - intercept	
Maximum/Minimum Value	$y = -2(x+3)^2 + 4$	Number of x-intercepts
Domain	Sketch	
Range		

Vertex	Axis of Symmetry	Direction of Opening
	Y - intercept	
	$y = -x^2 + 8x - 12$	
Maximum/Minimum Value		Number of x-intercepts
Domain	Sketch	
Range		

Vertex	Axis of Symmetry	Direction of Opening
	Y - intercept	
	$y = 2(x-4)(x+2)$	
Maximum/Minimum Value		x-intercepts
Domain	Sketch	
Range		