

5. A power output is  $P(x) = 2x^3 - 3x^2 + 6$  from the source to a location 10 miles away. At what distance is the output a maximum?
6. For an item's revenue  $R(x) = x^2 - 2x - 3$ , state the most lost.
7. The amount of weeks  $w$  needed for a project and pay  $p$  for the employees are related by the equation  $w^2 = p^2 - 900$ . Find  $dp/dw$  for  $w = 6$ .
8. For the demand function  $D(p) = 440/p$  having  $p = 12$ , tell if the demand is either elastic, inelastic, or unitary. State this indicates what is to be done with price  $p$  and how revenue is effected.
9. A company saves money at a rate of  $1500e^{0.6t}$ . Find a formula for total savings, where no money was saved when the company began.
10. For  $f(x) = (1/2)x^2 - 8$  over the  $x$ -interval  $[-4, 4]$ , find the area between the parabola and the  $x$ -axis.