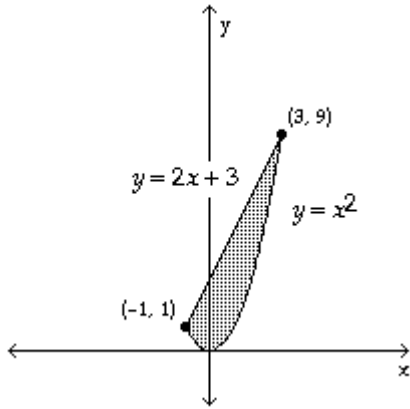


**MATH 232 - Calculus for Business
Homework #9**

Provide an appropriate response.

1) Find the area of the shaded region.



1) _____

2) Find the area of the region bounded by the graphs of $y = 8 - 2x - x^2$ and $y = 3x + 2$.

2) _____

3) Find the area of the region bounded by $y = x^2 - x - 9$ and $y = -x^2 + 3x + 7$

3) _____

4) A manufacturer's marginal revenue function is $MR = 200 - 6x$ (in dollars). What is the total revenue from $x = 10$ to $x = 20$? 4) _____

5) Find the average value of the function $f(x) = x^2 + 4$ from $x=1$ to $x=3$. 5) _____

6) For a company, the annual sales S (in millions of dollars) t years from now are predicted to be given by $S = 4\sqrt{2t + 1}$. Determine the average value of annual sales over the next four years. 6) _____

7) The number of weekly sales of a product was found to be given by $S(t) = 100te^{-t^2} + 100$, where t is the number of days after the start of advertising on the radio. Find the average weekly sales during the first 10 weeks of the advertising. 7) _____