

## Answers to Limit Def. of Derivative; Avg vs Inst Rates of Change; Tangent Lines

1)  $\frac{dy}{dx} = -4x$

2)  $\frac{dy}{dx} = 4x$

3) Average:  $\frac{9}{2}$  Instant.: 4

4) Average: 3 Instant.: 4

5) Average:  $\frac{5}{2}$  Instant.: 2

6) Average:  $\frac{5}{2}$  Instant.: 2

7)  $y = -8x - 10$

8)  $y = -3x + 4$

9)  $y = -2x - 2$

10)  $y = -5x - 10$