Math 134 Spring 2018
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Classwork 16   Name: _____

Work on as many problems as you can together with your group members. Towards the end of lecture your group will be asked to present problems correctly to receive classwork points.

1. Find the equation of the line that is parallel to the line $y = 2x - 4$ that passes through the point:

   (a) $(1, 1)$
   (b) $(-1, -1)$
   (c) $(-2, 1)$
   (d) $(1, -2)$
   (e) $(0, 6)$

2. Given the slope m and the point P, find the equation of the corresponding line as well as the equation of the perpendicular line that passes through the same point P.

   (a) $m = 3, P = (-2, 5)$
   (b) $m = -2, P = (1, 4)$
   (c) $m = -\frac{1}{2}, P = (0, 4)$
   (d) $m = \frac{3}{4}, P = (5, 1)$
   (e) $m = -3, P = (-2, -6)$

3. Graph the given line, as well as the line perpendicular to the given line that passes through the given point P:

   (a) $y = -3x + 6, P = (1, 1)$
   (b) $y = -\frac{1}{2}x + 1, P = (-1, 1)$
   (c) $y = 2x + 6, P = (-1, 1)$
   (d) $y = -\frac{3}{4}x - 6, P = (0, 6)$
   (e) $y = 5x + 5, P = (-1, 0)$

4. Find the average value of the function f from x_1 to x_2:

   (a) $f(x) = \sqrt{x}, x_1 = 4, x_2 = 9$
   (b) $f(x) = \frac{1}{x}, x_1 = 2, x_2 = 4$
   (c) $f(x) = x^2 + x + 4, x_1 = 0, x_2 = 2$
   (d) $f(x) = \sqrt[3]{x - 1}, x_1 = 9, x_2 = 28$
   (e) $f(x) = 2^x, x_1 = 2, x_2 = 4$