MATH 1314.003-Spring 2002 Skills Assessment 2.1 Name: Key

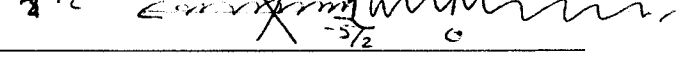
Write your answers in the place provided. Passing is 4 of 5 answers completely correct. You may retake this test if needed. You may not use calculators, notes, books or the paper of another person on this assessment.

1. Solve the inequality $-2x+3 \le 8$ for x and graph the solution.

$-3 \quad -3$

$-2x \le 5$

$x \ge 5/2 = -5/2$

Answer: 

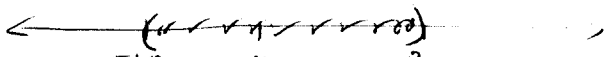
2. Solve the inequality $\left|\frac{d-8}{2}\right| < 9$ for d and graph the solution

$-9 < \frac{d-8}{2} < 9$

$-18 < d-8 < 18$

$+8 \quad +8 \quad +8$

$-10 < d < 26$

Answer: 

3. Find the slope of the line passing through the points (2, 4) and (7, -4)

$m = \frac{\text{change in } y}{\text{change in } x} = \frac{4-(-4)}{2-7} = \frac{8}{-5}$

Answer: $m = -8/5$

4. Find the equation of the line passing through the point (-2,3) and perpendicular to the line with equation y = -3/4 x +2

Slope = - reciprocal of $(-3/4)$

$= -(-4/3)$

$= 4/3$

$y = 4/3(x-(-2)) + 3$

$y = 4/3(x+2) + 3$

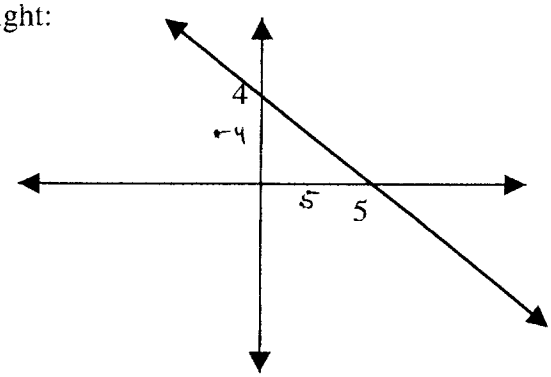
or

Answer: $y = 4/3x + 17/3$

5. Find the equation of the line with graph as to the right:

Slope $= \frac{\text{change in } y}{\text{change in } x} = \frac{-4}{5}$

y-int = 4.



Answer: $y = -\frac{4}{5}x + 4$