January 31, 2012

Alg1

Get out your homework

18) $(-5, 1)$ $\parallel$ to $y = -\frac{1}{2}x$

$m = -\frac{1}{2}$

$y = mx + b$

$1 = -\frac{1}{2} \cdot \frac{-5}{1} + b$

$1 = \frac{5}{2} + b$

$-2\frac{1}{2} \quad -\frac{5}{2}$

$-1\frac{1}{2} = b$

$y = -\frac{1}{2}x - 1\frac{1}{2}$

$-\frac{3}{2}$

5) $(-4, 5)$ ll to $y = -2x - 4$

$y = mx + b$

$5 = -2 \cdot -4 + b$

$5 = 8 + b$

$-8 \quad -8$

$-3 = b$

$y = -2x - 3$

1/31 - Equations of lines through a point and perpendicular to another line

1. Find $m_{\perp}$ from equation
2. Write formula
3. Substitute x, y and $m_{\perp}$
4. Solve for b
5. Substitute $m_{\perp}$ and b

through: $(-2, -1)$, perp. to $y = \frac{1}{3}x + 4$ $= m$

$m_{\perp} = -3$

$y = mx + b$

$-1 = -3 \cdot -2 + b$

$-1 = 6 + b$

$-6 \quad -6$

$-7 = b$

$y = -3x - 7$

1. Find $m_\perp$ from equation
2. Write formula
3. Substitute x, y and $m_\perp$
4. Solve for b
5. Substitute $m_\perp$ and b

through: $(4, 0)$, perp. to $y = 4x + 3$

$m_\perp = -\frac{1}{4}$

$y = mx + b$

$0 = \frac{-1}{4} \cdot 4 + b$

$0 = -1 + b$

$+1 \quad +1$

$1 = b$

$y = -\frac{1}{4}x + 1$

1. Find $m_\perp$ from equation
2. Write formula
3. Substitute x, y and $m_\perp$
4. Solve for b
5. Substitute $m_\perp$ and b

through: $(5, 1)$, perp. to $y = -x + 5$

$m_\perp = 1$

$y = mx + b$

$1 = 1 \cdot 5 + b$

$1 = 5 + b$

$-5 \quad -5$

$-4 = b$

$y = x - 4$

1. Find $m_\perp$ from equation
2. Write formula
3. Substitute x, y and $m_\perp$
4. Solve for b
5. Substitute $m_\perp$ and b

through: $(-5, 2)$, perp. to $y = \frac{5}{7}x - 4$

$m_\perp = -\frac{7}{5}$

$y = mx + b$

$2 = -\frac{7}{5} \cdot -5 + b$

$2 = 7 + b$

$-5 = b$

$y = -\frac{7}{5}x - 5$

1. Find $m_\perp$ from equation
2. Write formula
3. Substitute x, y and $m_\perp$
4. Solve for b
5. Substitute $m_\perp$ and b

through: $(-2, 3)$, perp. to $y = -3x - 5$

$m_\perp = \frac{1}{3}$

$y = mx + b$

$3 = \frac{1}{3} \cdot -2 + b$

$3 = -\frac{2}{3} + b$

$+\frac{2}{3} \quad +\frac{2}{3}$

$3\frac{2}{3} = b$

$y = \frac{1}{3}x + 3\frac{2}{3}$

HOMEWORK

Buff Worksheet 7
1-13 odd, 15-28 all

Test Thursday Due Wednesday