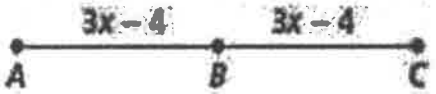
Review Unit 1 Test

Study both quizzes.

- Definitions
- Name planes
- Name rays
- Name opposite rays
- Name angles
- Use Segment Addition Postulate
- Midpoint to find measures
- Bisector to find measures
- Midpoint formula
- Distance formula to find perimeter
- Constructions
- Parallel and Perpendicular lines
- Writing equations of parallel and perpendicular lines
- Identifying parallel and perpendicular slopes

Problems to practice:

1. If AC = 40, then find the value of x and then find AB & BC.



$3x-4+3x-4=40$

$6x-8=40$

$+8 \quad +8$

$6x=48$

$x=8$

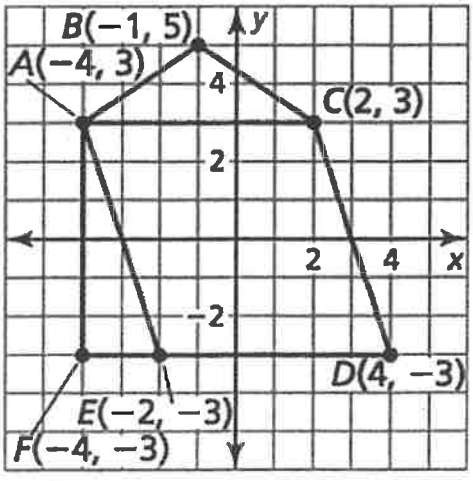
$AB = 3(8)-4$

$= 24-4$

$= 20$

$BC = 20$

2. Find the perimeter of ΔAFE



$AF = 7$

$FE = 2$

$AE = \sqrt{(-4+2)^2+(3+3)^2}$

$= \sqrt{(-2)^2+(6)^2}$

$= \sqrt{4+36} = \sqrt{40}$

$= 6.3246$

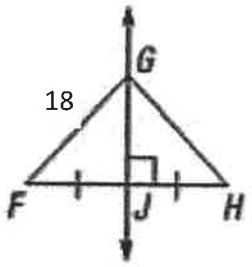
6.3246

$+7$

$+2$

15.3246

3. Find HG.



$HG = 18$

$m = 4$

4. Write the equation of a line passing through (-3, 8) and is perpendicular to $x + 4y = 10$.

$y - y_1 = m(x - x_1)$

$y - 8 = 4(x + 3)$

$y - 8 = 4x + 12$

$+8 \quad +8$

$y = 4x + 20$

$-x \quad -x$

$\frac{4y}{4} = \frac{-1x}{4} + \frac{10}{4}$

$y = -\frac{1}{4}x + \frac{5}{2}$

5. Two students were paired up working on determining which lines were parallel, perpendicular, or neither. Here are the two equations.
$y = 3x - 4$ and $x + 3y = 6$.

Janus worked out the two equations and found them to be perpendicular, and Karen determines them to be neither. Who is correct? Support your answer by showing your work.

$m = 3$

$m = -\frac{1}{3}$

$x + 3y = 6$

$-x \quad -x$

$\frac{3y}{3} = \frac{-1x}{3} + \frac{6}{3}$

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

1