GT/PAP Geometry Summer Assignment

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The summer assignment will count as a quiz grade. Be prepared to turn in the assignment on the first day of class. If you have any questions about directions, you may e-mail us. We will try to check our e-mail at least once a week during the summer.

Instructions:

1. Please do all work on separate notebook paper. Place your answers on the answer page provided. Staple work to the back of the answer sheet. You **WILL NOT** turn in this packet.
2. Show **ALL** of the algebra work to receive credit.
3. Your work **MUST** be done in **PENCIL!!**
4. Leave your answer in simplest fractional form. **NO** decimals allowed.

**Part I: Solve the following equations for the variable.**

1. $7w + 2 = 3w + 94$
2. $5y + 1.8 = 4y – 3.2$
3. $4m – 8 – 2m + 5 = 0$
4. $2 – 3(x + 4) = 8$
5. $4a – 2(1 – a) = -38$
6. $b – 3(b + \frac{4}{3}) = 2b + 3$
7. $\frac{d}{2} + \frac{d}{5} + \frac{d}{3} = 3$
8. $3y+16=22$
9. $3\left(x-4\right)+4\left(x+8\right)=10-5\left(x-3\right)$
10. $24-\frac{x}{3}=6$

**Part II: Write the equation of the line described. Write the final equation in slope-intercept form. When given a point instead of the y-intercept, use point slope form to begin your work. Drawing a graph DOES NOT count as work.**

1. The line with slope $\frac{5}{3}$ and a y-intercept of $–2$.
2. The line passing through $(-4, 6)$ and parallel to the line $y=3x+8$.
3. The line passing through $(1, 2)$ and perpendicular to the line $y=4x+3$.
4. The line passing through $(8, 3)$ and $(2, -1)$.
5. The line with a slope of $\frac{3}{5}$ and passing through the origin.
6. The line with a y-intercept of $–6$ and parallel to the line $5x+4y=1$
7. The line through $(-1, 4)$ and $(5, 8)$.
8. The horizontal line through $(5, -7)$.
9. The line passing through $(-2, 4)$ and perpendicular to the line through $(1, 1)$ and $(5, 7)$.
10. A vertical line through $(3, 10)$

**Part III: Find the midpoint of the given points. Remember, the midpoint formula is…**

$$\left(\frac{x\_{1}+x\_{2}}{2},\frac{y\_{1}+y\_{2}}{2}\right)$$

1. $\left(4, 5\right)$ and $(6, 5)$
2. $\left(3, 9\right)$ and $(17, 1)$
3. $\left(1, -7\right)$ and $(-5, 7)$
4. $\left(-13, -9\right)$ and $(-6, -4)$
5. $\left(2, -3\right)$ and $(2, 5)$

**Part IV: Find the distance of the given points. Remember, the distance formula is…**

$$d=\sqrt{(x\_{2}-x\_{1})^{2}+(y\_{2}-y\_{1})^{2}}$$

1. $\left(3, 5\right)$ and $(3, -2)$
2. $\left(-2, 7\right)$ and $(4, -1)$
3. $\left(-9, -10\right)$ and $(-3, 5)$
4. $\left(0, 0\right)$ and $(3, 4)$
5. $\left(-1, 5\right)$ and $(0, -6)$

**Part V: Decide whether the following lines are parallel, perpendicular, or neither by solving for y and checking the slopes. Remember: Parallel lines have the same slope and Perpendicular lines have opposite reciprocal slopes.**

1. Line A: $3x+2y=12$, Line B: $y+\frac{2}{3}x=4$
2. Line A: $y=2x+8$, Line B: $x=\frac{y-8}{2}$
3. Line A: $2x=10$, Line B: $y-\frac{1}{5}x=16$
4. Line A: $4y=x-20$, Line B: $-8y+2x=-6$
5. Line A: $y+6=-7x$, Line B: $-2y=14x+12$

**Part VI: Solve each system of equations using substitution or elimination. Put your answer as a coordinate pair. Graphing is NOT an acceptable method.**

1. Line A: $2x+y=5$, Line B: $4x-2y=6$
2. Line A: $x-2y=4$, Line B: $2x-y=-1$
3. Line A: $4x-y=17$, Line B: $3x+2y=-1$
4. Line A: $4x+3y=-23$, Line B: $3x-3y=-3$
5. Line A: $5x+2y=4$, Line B: $-2x-3y=9$

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Place your answers on this page. Staple the graph picture and **ALL** of your work to this page.

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