

Complete as many of the following problems as you can with your group. You do not have to go in order. Each group will be given a specific problem that they must complete and present to either Professor MG or to Stefanie before they leave.

If **your entire table** finishes early, and you have presented your given problem, you may leave early.

1. Find the mean of the numbers $-3, -4, 6, 9$
2. Find the median of the set $2, 3, 6, 9, 11$
3. Find the domain and range of the relation $S = \{(1, 3), (2, 5), (1, 6)\}$
4. Find the midpoint of the line segment that connects $(4, 3)$ and $(-2, 5)$
5. Graph the following coordinates: $(2, 3)$, $(-4, 5)$, $(3, 1)$, and $(-1, -3)$
6. Find the center and radius of the following circle: $x^2 - 6x + y^2 + 4y + 4 = 0$
7. Find the distance between $(1, 3)$ and $(5, -1)$
8. Write each verbal function representation in its symbolic representation. Then simplify the expression. Let x represent the number:
 - (a) y is six more than the product of negative four and a number
 - (b) Divide a number by 6 then add 5 to produce y
 - (c) y is equal to 3 less than a number multiplied by itself
9. Write the following in interval notation:
 - (a) $\{x : 6 < x \leq 10\}$
 - (b) $\{x : x < -6\}$

Note: We did not get to the material for problems 8 and 9 in class, so you may skip them.

Key:

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|---------------------------------------|----------------------------------|---------------------------|
| 1. 2 | 5. Check with a graphing utility | (b) $y = \frac{x}{6} + 5$ |
| 2. 4.5 | 6. Center: $(3, -2)$, Radius: 3 | (c) $y = x^2 - 3$ |
| 3. $D = \{1, 2\}$, $R = \{3, 5, 6\}$ | 7. $4\sqrt{2}$ | 9. (a) $(6, 10]$ |
| 4. $(1, 4)$ | 8. (a) $y = -4x + 6$ | (b) $(-\infty, -6)$ |