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| **Day 1 Placemat (Foundations skills needed for Unit 1)** |
| 1. **Solve:**
2. **Solve:**
3. **Solve:**
 | 1. **Segment Addition Postulate:**

In the segment below, AB = 2*x* + 9, BC = 4*x* – 7, AC = 38What do x and AB equal?*x* = \_\_\_\_\_\_ AB = \_\_\_\_\_\_\_\_\_\_\_ | 1. **Definition of a Midpoint:**

In the segment below, B is the midpoint of .AB = 4*x* + 2, BC = 6*x* - 8What do *x* and AC equal?*x* = \_\_\_\_\_\_ AC = \_\_\_\_\_\_ | 1. **Graph** the following lines.
2. x = 2
3. y = 4
4. y = x (Hint: this is y = 1x + 0)
5. y = -x (Hint: this is y = -1x + 0)

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| 1. **Classify the following angles:**

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| 1. **Angle Addition Postulate:**

SIDE NOTE: m1 is the shortcut way of writing “the measure of angle 1.” It’s like math texting – you write LOL instead of “laughing out loud,” math people write m1 instead of “the measure of angle 1.”What is *x* equal to?\_\_\_\_\_\_\_ | 1. **Angle Bisector:**

 bisects What are *x* and ?\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Solve the following systems of equations algebraically (substitution or elimination).1. y = 2x + 5 **11.** 5x + 2y = 19 **12.** What does it mean to be a solution to a 3x – y = 4 3x – 4y = 1 system of equations?

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| 1. **Find the following linear equations given the following information. Use the form y = mx+b.**
 | 1. **If U is between T and B, find the value of x and the lengths of the segments. (Hint: Draw a picture for each problem with the given information and then write the equation to solve.)**

**\*\*between implies “on the same line as the other 2 points.**a. TU = 2x, UB = 3x + 1, TB = 21 b.TU = 4x-1, UB = 2x -1, TB = 5x x = \_\_\_\_\_\_\_TU = \_\_\_\_\_\_UB = \_\_\_\_\_\_x = \_\_\_\_\_\_\_TU = \_\_\_\_\_\_UB = \_\_\_\_\_\_x = \_\_\_\_\_\_\_TU = \_\_\_\_\_\_UB = \_\_\_\_\_\_TB = \_\_\_\_\_\_\_ |
| 1. Slope of ½ and goes through the point (8, -2).
2. Goes through the points (-6, 5) and (-2, -4).
3. A line perpendicular to y = 3x – 5 and goes through the point (-9, 7)
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| Given what you know about triangles, right angles, and straight angles, solve for the variables:    | The angles around parallel lines have some really interesting properties…can you figure them out? Find the values of a, b, c, and d.Side Note: The little arrows on the two lines are Geometry notation for saying “these lines are parallel.”  |
| 1. **Let.**

ABC2x - 8x + 17 x = \_\_\_\_\_\_\_\_\_ AB = \_\_\_\_\_\_\_\_\_ BC = \_\_\_\_\_\_\_\_\_ AC = \_\_\_\_\_\_\_\_\_ | **Let , AC = 3x – 31** x = \_\_\_\_\_\_\_\_\_ x + 6AB = \_\_\_\_\_\_\_\_\_AB BC = \_\_\_\_\_\_\_\_\_ CAC = \_\_\_\_\_\_\_\_\_  |