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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 = 38  What 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* - 8  What 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) |
| 1. **Classify the following angles:** | | | |
| 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.**   A  B  C  2x - 8  x + 17  x = \_\_\_\_\_\_\_\_\_ AB = \_\_\_\_\_\_\_\_\_  BC = \_\_\_\_\_\_\_\_\_ AC = \_\_\_\_\_\_\_\_\_ | | **Let , AC = 3x – 31**  x = \_\_\_\_\_\_\_\_\_  x + 6  AB = \_\_\_\_\_\_\_\_\_  A  B  BC = \_\_\_\_\_\_\_\_\_  C  AC = \_\_\_\_\_\_\_\_\_ |