Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_  
Geometry // Mr. Burke

Chapter 3: Parallel & Perpendicular Lines

Extra Practice

1. Use the diagram below to fill in the chart.

2

1

4

7

8

5

6

3



*m*

*n*

|  |  |  |
| --- | --- | --- |
| **Angle Pair** | **Name** | **Relationship** |
| 1, 3 |  |  |
|  | Same Side Interior |  |
| 2, 8 |  |  |
|  |  | Supplementary |
| 6,7 |  |  |
|  | Alternate Interior |  |
| 1, 8 |  |  |

2. Find the value of *x* if , , and . Justify your initial step. [Diagram is not to scale]

****

3. Complete the table:

|  |  |
| --- | --- |
| **Name** | **General Form** |
| Point-Slope Form |  |
| Slope-Intercept Form |  |
|  | A*x* + B*y* = C |

4. Write the equation **in slope-intercept form** of the line through point *P*(–10, 1) with slope –5?

5. Write the equation, **in all 3 forms**, of the line that passes through the points (-4, 7) and (6, -4).

|  |  |  |
| --- | --- | --- |
| Point-Slope Form:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Slope-Intercept Form:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Standard Form:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

6. Explain the similarities and differences between the equations of parallel and perpendicular lines.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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7. Are the lines parallel, perpendicular, or neither? Explain.

*y* = –*x* – 4 5*x* + 5*y* = 20

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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8. Given *A*(1, 5) and *B*(6,11), write the equation, **in standard form** of the line that is the perpendicular bisector of .