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| \*Learning Target: |
| \*Critical Content: |

**Parallel lines –**

PARALLEL LINES HAVE THE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| **Examples** | 1) Write an equation in slope-intercept form for the line that passes through (-3, 5) and is parallel to the graph of $y=2x-4$. | 1) Through (4, -1) and parallel to $y=\frac{1}{4}x+7$ |
| Step 1: Find m |  |  |
| Step 2: Write in point-slope form |  |  |
| Step 3: Convert to slope-intercept form |  |  |

**Perpendicular lines –**

PERPENDICULAR LINES HAVE SLOPES THAT ARE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| **Examples** | 2) Is angle DFE a right angle in the logo? |
|  | Slope of $\overbar{BE}$ =Slope of $\overbar{AD}$ =Right angle? Explain. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 3) Determine whether the graphs of $y=5, x=3, and y=-2x+1$ are parallel or perpendicular. Explain.Slope of $y=5$: \_\_\_\_\_\_\_\_Slope of $x=3$: \_\_\_\_\_\_\_\_Slope of $y=-2x+1$: \_\_\_\_\_\_\_\_Which lines are perpendicular? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Which lines are parallel? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **Examples** | 4) Ex4: Write an equation in slope-intercept form for the line that passes through (-4, 6) and is perpendicular to the graph of $2x+2y=12$. | Ex4: Write an equation in slope-intercept form for the line that passes through (4, 7) and is perpendicular to the graph of $y=\frac{2}{3}x-1$ |
| Step 1: Find m\*Make sure it is in slope-intercept form first! | Write $2x+2y=12$ in slope-intercept form:Slope of $2x+2y=12$ is \_\_\_\_\_\_\_\_\_\_ |  |
| Step 2: Find m of a perpendicular line. | Slope perpendicular to $2x+2y=12$ is \_\_\_\_\_\_\_\_\_ |  |
| Step 3: Put it in point-slope form. |  |  |
| Step 4: Convert to slope-intercept form. |  |  |