***Working with Slopes – Mixed Problems*** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Here are the slopes of some lines.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | 2 |
| Find two slopes that are parallel | Find two slopes that are perpendicular | Find two other slopes that are parallel | Find two other slopes that are perpendicular |

1. Give a slope that is perpendicular to each of the following slopes:

|  |  |  |  |
| --- | --- | --- | --- |
| 1. m =
 | 1. m =
 | 1. m = 2
 | 1. m = 0
 |

1. Calculate the slope between each pair of points. State whether the slope are parallel, perpendicular, or neither.

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| 1. ( 4, 5 ) and (2, 1) ( 6, 2 ) and (10, 10)
 |
| 1. (2, 1) and (12, 5) ( 6, 7) and (8, 2)
 |
| 1. ( 2, 3 ) and (5, 1) ( 6, 2) and ( 0, –2 )
 |
| 1. ( 3, 2 ) and (8, 2) (–4, 2) and (–4, 8 )
 |

1. Use slopes to determine if the following three points form a right angle.

|  |  |  |  |
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| a)  | L( –4, 3 )M( –2, –3 )N( 7, 0 ) | b)  | P( –1, –3 )Q( 3, 5 )R( –5, 0) |

1. Do the following three points form a straight line? Justify using slopes.
A( 13, 18 ) B( –5, 9 ) C( 19, 21 )
2. Point L lies on the line KM. What is the value of *w*? Show your work/thinking.

3. A line with a slope of 2 through the points (2, 7) and (*a*, *3a*). What is the value of *a*? Show your work/thinking.