Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_

**4.2B The Slope Formula\_Classwork**

*Objective: Determine whether 3 points are collinear. Given the slope and one point, find the missing value of an ordered pair. . CCSS: 8.EE.6* ***HW: (4.2B) p. 154 #21-25, 27-31, 33***

**Collinear is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

*Applying the slope formula*

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| **EXAMPLE 1:** Do the points A(-3, 2), B(-1, 5), and C(1, 8) lie on the same line? Without using a graph, how do you know?  | **EXAMPLE 2:**Do the point D(7, 3), E(5, 5), and F (3, 4) lies on the same line? Without using a graph, how do you know?  |

Use an equation to find the value of k so that the line that passes throw the given points has the given slope. Use the slope formula: $\frac{Y\_{2}-Y\_{1}}{X\_{2}-X\_{1}} $

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| **EXAMPLE 3:** (4, -2) and (0, k); m = -1 | **EXAMPLE 4:**(-3, k) and (1, 4); m = $\frac{1}{2}$ |
| **EXAMPLE 5** (k, -5) and (-4,-2 ); m = $\frac{3}{4}$  | **EXAMPLE 6:**(2, 8) and (k, 2); m = 2 |

**Critical Thinking**

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| Is it more difficult to walk up the ramp or the hill? **EXPLAIN**.  |

**PRACTICE PROBLEMS:**

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| 1. Do the points A(4,-5), B(0, -3), and C(-4, 2) lie on the same line? Without using a graph, how do you know?
 | 1. Do the point D(-3, 2), E(-5, 5), and F (-7, 8) lies on the same line? Without using a graph, how do you know?
 |
| 1. Find the value of k: (1, -2) and (k, 0); m = 1
 | 1. Find the value of k: (3, k) and (7, 3); m = $-\frac{1}{4}$
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***\*\*\*\**\*\*WARM-UP\*\*\*\*\***

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| EXAMPLE 1: Solve for y.$$6x-y=-2$$ | EXAMPLE 2: Solve for y$$8x-4y=2$$ |
| 1. Solve for y.

$$5x-y=3$$ | 1. Solve for y.

$$2x+3y=18$$ |