

Name Key

Date \_\_\_\_\_

## Linear Equations

(Answer ID # 1022859)

State whether the lines are parallel, perpendicular, or neither.

|                                                                                                                                                                      |                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. <math>5x - 8y = -10</math> <math>m = \frac{5}{8}</math><br/> <math>y = \frac{5}{8}x + \frac{5}{4}</math></p> <p>Parallel ✓</p>                                 | <p>2. <math>-2x = 14 + 16y</math> <math>m = -\frac{1}{8}</math><br/> <math>y = -8x - 308</math> <math>m = -8</math></p> <p>Neither!<br/> <del>Perpendicular</del></p>                                                                                                            | <p>3. <math>34y = -1080 - 28x</math> <math>m = -\frac{14}{17}</math><br/> <math>14x + 17y = -540</math><br/> <math>m = -\frac{14}{17}</math></p> <p>Parallel ✓</p>                   |
| <p>4. <math>9x + 4y = 166</math> <math>m = -\frac{9}{4}</math><br/> <math>4x - 9y = 354</math> <math>m = \frac{4}{9}</math></p> <p>Perpendicular ✓</p>               | <p>5. <math>y = \frac{2}{3}x - \frac{37}{3}</math> <math>m = \frac{2}{3}</math></p> <p><math>\frac{274}{7} = \frac{-26}{7}y + 2x</math><br/> <math>m = -2 - \frac{7}{26}</math><br/> <math>= \frac{14}{26} = \frac{7}{13}</math></p> <p>Not Parallel and Not Perpendicular ✓</p> | <p>6. <math>2x - 3y = -48</math> <math>m = \frac{2}{3}</math><br/> <math>5x - 9y = -156</math><br/> <math>m = \frac{5}{9}</math></p> <p>Not Parallel and Not Perpendicular ✓</p>     |
| <p>7. <math>y = \left(\frac{3}{11}\right)x + \frac{303}{11}</math><br/> <math>-3y = -449 + 11x</math><br/> <math>m = -\frac{11}{3}</math></p> <p>Perpendicular ✓</p> | <p>8. <math>x = \frac{196}{19} + \frac{1}{19}y</math> <math>m = 19</math><br/> <math>y = \frac{-19}{2}x + \frac{235}{2}</math> <math>m = -\frac{19}{2}</math></p> <p>Not Parallel and Not Perpendicular ✓</p>                                                                    | <p>9. <math>y = \left(\frac{-2}{3}\right)x - 18</math><br/> <math>14y = -388 + 2x</math> <math>m = \frac{2}{14} = \frac{1}{7}</math></p> <p>Not Parallel and Not Perpendicular ✓</p> |
| <p>10. <math>13x - 17y = 296</math> <math>m = \frac{13}{17}</math><br/> <math>y = \left(\frac{13}{17}\right)x - \frac{296}{17}</math></p> <p>parallel</p>            | <p>11. <math>-6x = -162 - 4y</math> <math>m = \frac{3}{2}</math><br/> <math>3x - 2y = 81</math><br/> <math>m = \frac{3}{2}</math></p> <p>Parallel</p>                                                                                                                            | <p>12. <math>3x + 7y = 400</math> <math>m = -\frac{3}{7}</math><br/> <math>7x - 3y = 160</math><br/> <math>m = \frac{7}{3}</math></p> <p>Perpendicular</p>                           |