Comparing Slopes # 4

1. CJ, Holland, Brandon
   m = 3/2 or 4/5, m = 0, m = 7
   Brandon is greatest, Holland is least.

2. Smith's, Harrison, Macley's
   m = 7/4 or 1.75, m = 7/2 or 3.5, m = 2
   Harrison's is greatest, Smith's is least.

3. Tyler, Aubri, Kyote
   m = 3/2 or 1.5, m = 3/2 or 1.5, m = 1.25
   Aubri & Tyler tie for greatest, Kyote is least.

4. Braden, Omar, Malik
   m = 120, m = 100, m = 120
   Malik is greatest, Braden is least.

5. Jesse, Troy, Lucy
   m = 29, m = 28, m = 25
   Jesse is greatest, Lucy is least.
Casey is greatest; Hunter is least.

Dennis, Myriah tie for greatest; Kamron is least.

Katie is greatest; Christine is least.

Taylor is greatest; Melissa is least.
Finding Slopes #4

1. (4, 8) (3, 4)  
   \[
   \frac{4 - 8}{3 - 4} = \frac{-4}{-1} = 4 \\
   \frac{4}{-9} = \frac{4}{9}
   \]

2. \( m = -1 \)

3. (-9, 16) (-11, 16)  
   \[
   \frac{16 - 16}{-11 + (-9)} = \frac{0}{-20} = 0
   \]

4. (3, 2) (1, -4)  
   \[
   \frac{4 - 4}{1 + (-3)} = \frac{0}{-2} = 0
   \]

5. (-5, 9) (3, -3)
   \[
   \frac{-4 - 2}{1 + (-3)} = \frac{-6}{-2} = \frac{3}{2}
   \]

6. (-2, 2) (4, -4)
   \[
   \frac{2 + (-4)}{3 - 9} = \frac{-2}{-10} = \frac{3}{5}
   \]

7. (9, -4) (3, 2)
   \[
   \frac{3 - 9}{3 + (-5)} = \frac{-6}{-2} = \frac{3}{2}
   \]

8. (a, 2) (4, -4)
   \[
   \frac{-4 - 2}{1 + (12)} = \frac{6}{10} = \frac{3}{5}
   \]
\[ m = \frac{2}{3} \]

\[ (9,1), (1,4) \]

\[ \frac{4-0}{1-9} = -\frac{4}{8} = -\frac{1}{2} \]

\[ (4,3), (8,4) \]

\[ \frac{4-3}{8-4} = \frac{1}{4} \]

\[ (0,1), (1,3) \]

\[ \frac{3-1}{1-0} = \frac{2}{1} = 2 \]

\[ (1,2), (2,4) \]

\[ \frac{4-2}{2-1} = \frac{2}{1} = 2 \]

\[ (3,1), (-3,3) \]

\[ \frac{3-1}{-3-3} = \frac{-2}{-6} = \frac{1}{3} \]

\[ (0,1), (1,-2) \]

\[ \frac{-4-0}{0+3} = \frac{-4}{3} \]

\[ (1,8), (-1,7) \]

\[ \frac{-7-8}{-1-1} = \frac{-15}{-2} = \frac{15}{2} \]

\[ (1,-3), (1,-2) \]

\[ \frac{-2+13}{1+11} = \frac{11}{12} \]
5-1 Box 8 Glencoe 5-1 practice

1. slope $= \frac{-3}{4} = -3$
2. $m = \frac{4}{5}$
3. $m = 0$

4. $(6,3)$ $(7,-4)$
   $m = \frac{4-3}{7+6}$
   $m = -\frac{1}{13}$

5. $(9,3)$ $(7,-5)$
   $m = \frac{-5+3}{7+9}$
   $m = -\frac{2}{16} = -\frac{1}{8}$

6. $(6, -2)$ $(5, -4)$
   $m = \frac{-4+2}{5-6}$
   $m = \frac{-2}{1} = -2$

7. $(7, -4)$ $(4, 8)$
   $m = \frac{8+4}{4-7}$
   $m = \frac{12}{-3} = -4$

8. $(7, -8)$ $(7, 6)$
   $m = \frac{8-5}{7+1}$
   $m = \frac{3}{8}$
   (Undefined)

9. $(9, 9)$ $(3, 9)$
   $m = \frac{9-9}{5-3}$
   $m = 0$

10. $(15, 2)$ $(6, 5)$
    $m = \frac{5-2}{6-15}$
    $m = \frac{3}{-9} = -\frac{1}{3}$

11. $(3, 9)$ $(2, -8)$
    $m = \frac{9-1}{3+2}$
    $m = \frac{8}{5}$

12. $(7, 8)$ $(7, -5)$
    $m = \frac{10-5}{12-12}$
    $m = \frac{5}{0}$
    (Undefined)

13. $(12, 10)$ $(12, 5)$
    $m = \frac{8+5}{7+2}$
    $m = \frac{13}{9}$

14. $(0, 2)$ $(-9, 5)$
    $m = \frac{-9+9}{0-5}$
    $m = 1$
24 \( \frac{8}{12} = \frac{2}{3} \)

25 \( (0, 12125) \) \( (5, 10, 100) \)

\[
10100 - 12125 = \frac{\sqrt{405}}{5}
\]

16 \( (-2, r) \) \( (6, 7) \) \( m = \frac{1}{2} \)

\[
\frac{r - 7}{2 - 6} = \frac{1}{2}
\]

\[
2(r - 7) = 1(2 - 6)
\]

\[
2r - 14 = -8
\]

\[
+14\quad +14
\]

\[
2r = 6
\]

\[
\frac{r}{2} = 3
\]

\[
r = 3
\]

18 \( (-3, -4) \) \( (-5, r) \) \( m = -\frac{9}{2} \)

\[
\frac{r + 4}{-5 + 3} = -\frac{9}{2}
\]

\[
2(r + 4) = -9(-2)
\]

\[
2r + 8 = 18
\]

\[
-8
\]

\[
2r = 10
\]

\[
\frac{r}{2} = 5
\]

\[
r = 5
\]

19 \( (-8, r) \) \( (1, 3) \) \( m = \frac{1}{6} \)

\[
\frac{r - 8}{-5 - 1} = \frac{7}{6}
\]

\[
6(r - 3) = 7(-6)
\]

\[
6r - 18 = -42
\]

\[
+18\quad +18
\]

\[
6r = -24
\]

\[
\frac{r}{6} = 4
\]

\[
r = -4
\]

19 \( (1, 4) \) \( (r, 5) \) undefined

means \( x \)-values are equal,

so \( r = 1 \)

20 \( (r, 7) \) \( (11, 8) \) \( m = -115 \)

\[
\frac{7 - 8}{r - 11} = -\frac{1}{115}
\]

\[
5(-1) = -1(r - 11)
\]

\[
-5 = r + 11
\]

\[
-16 = -r\quad r = 16
\]

21 \( (-7, 2) \) \( (-8, r) \) \( m = -8 \)

\[
\frac{r - 2}{-8 + 7} = -\frac{5}{1}
\]

\[
r - 2 = -5(-1)
\]

\[
+2\quad +2
\]

\[
r = 7
\]

23 \( (r, 12) \) \( (5, r) \) \( m = 0 \)

\[
y\)-values are equal,

so \( r = 2 \)