Find the slope of a line passing through (2, –5) and (–1, 0).

\[
\Delta y = y_2 - y_1 = 0 - (-5) = 5 \\
\Delta x = x_2 - x_1 = -1 - 2 = -3 \\
\text{Slope} = \frac{\Delta y}{\Delta x} = \frac{5}{-3} = -\frac{5}{3}
\]

Find the slope of a line that passes through the given two points using ratio method.

1) (9, 2) and (–5, –8)
2) (6, –1) and (7, 3)
3) (–3, 1) and (–7, 5)
4) (–4, –9) and (6, –2)
5) (8, 4) and (–9, 3)
6) (–7, –2) and (3, 6)
7) (–3, 5) and (–2, –6)
8) (–1, 0) and (–8, 1)

Slope = \frac{\Delta y}{\Delta x} = \_\_\_\_

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Find the slope of a line that passes through the given two points using ratio method.

1) \((9, 2)\) and \((-5, -8)\)

\[ \Delta y = y_2 - y_1 = 2 - (-8) = 10 \]
\[ \Delta x = x_2 - x_1 = 9 - (-5) = 14 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{10}{14} = \frac{5}{7} \]

2) \((6, -1)\) and \((7, 3)\)

\[ \Delta y = y_2 - y_1 = 3 - (-1) = 4 \]
\[ \Delta x = x_2 - x_1 = 7 - 6 = 1 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{4}{1} = 4 \]

3) \((-3, 1)\) and \((-7, 5)\)

\[ \Delta y = y_2 - y_1 = 5 - 1 = 4 \]
\[ \Delta x = x_2 - x_1 = -7 - (-3) = -4 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{4}{-4} = -1 \]

4) \((-4, -9)\) and \((6, -2)\)

\[ \Delta y = y_2 - y_1 = -2 - (-9) = 7 \]
\[ \Delta x = x_2 - x_1 = 6 - (-4) = 10 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{7}{10} \]

5) \((8, 4)\) and \((-9, 3)\)

\[ \Delta y = y_2 - y_1 = 3 - 4 = -1 \]
\[ \Delta x = x_2 - x_1 = -9 - 8 = -17 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{-1}{-17} = \frac{1}{17} \]

6) \((-7, -2)\) and \((3, 6)\)

\[ \Delta y = y_2 - y_1 = 6 - (-2) = 8 \]
\[ \Delta x = x_2 - x_1 = 3 - (-7) = 10 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{8}{10} = \frac{4}{5} \]

7) \((-3, 5)\) and \((-2, -6)\)

\[ \Delta y = y_2 - y_1 = -6 - 5 = -11 \]
\[ \Delta x = x_2 - x_1 = -2 - (-3) = 1 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{-11}{1} = -11 \]

8) \((-1, 0)\) and \((-8, 1)\)

\[ \Delta y = y_2 - y_1 = 1 - 0 = 1 \]
\[ \Delta x = x_2 - x_1 = -8 - (-1) = -7 \]
Slope = \[ \frac{\Delta y}{\Delta x} = \frac{1}{-7} = -\frac{1}{7} \]