#4 (5, 2) (−5, 14)
x_1 y_1 x_2 y_2

$m = \frac{y_2 - y_1}{x_1 - x_2} = \frac{14-2}{-5-5} = \frac{12}{-10}$

$m = -\frac{6}{5} = -1.2$

$y - y_1 = m(x - x_1)$

$y - 2 = -1.2(x - 5)$

$y - 2 = -1.2x + 6$

$y = -1.2x + 8$

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$y = 6x - 11$

$-2x - 3y = -7$

$-2x - 3(6x - 11) = -7$

$-2x - 18x + 33 = -7$

$-20x + 33 = -7$

$-33 \quad -33$

$\frac{-20x = -40}{-20 \quad -20}$ $x = 2$

$y = 6(2) - 11$

$y = 12 - 11$

$y = 1$ (2, 1)

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#5 $5x + 9y = -18$ (9, 6)
x_1 y_1

$-5x \quad -5x$

$\frac{9y}{9} = \frac{-5x - 18}{9}$

$y = \frac{-5}{9}x - 2$

$y = mx + b$

$m_1 = -\frac{5}{9}$ $m_2 = m_1 = -\frac{5}{9}$

$y - y_1 = m(x - x_1)$

$y - 6 = -\frac{5}{9}(x - 9)$

$y - 6 = -\frac{5}{9}x + 5$

$+6 \quad +6$

$y = -\frac{5}{9}x + 11$

$y = mx + b$

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#6 $8x - 3y = -18$

$-8x \quad -8x$

$\frac{-3y}{-3} = \frac{-8x - 18}{-3}$

$y = \frac{8}{3}x + 6$

$y = mx + b$

$m_1 = \frac{8}{3}$ $m_2 = \frac{-1}{m_1}$

$m_2 = -\frac{3}{8}$

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#7 $y = -\frac{5}{3}x + 7$

$y = mx + b$

$m = \frac{\Delta y}{\Delta x} = \frac{\text{Rise}}{\text{Run}} = \frac{-5}{3}$

$b = 7$

$0 = \frac{-5}{3}(x) + 7$

$-7 = \frac{-5}{3}x$

$\frac{-7 \cdot 3}{-5} = x = \frac{21}{5} = 4.2$

(4.2, 0)

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#8 Evaluate

$\frac{\frac{3}{5} - \frac{1}{3}}{\frac{1}{4}} = \frac{\frac{9-5}{15}}{\frac{1}{4}}$

$\frac{4}{15} \div \frac{1}{4}$

$\frac{4}{15} \times \frac{4}{1} = \frac{16}{15} = 1\frac{1}{15}$

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#4 $(7a^2)^3$

$7^3 a^{2(3)}$

$7^3 a^6$ $\frac{7\times7\times7}{a^6} = \frac{343}{a^6}$

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#10

$\frac{6x^4y^2}{4x^1y^7z^{-3}} \div \frac{4x^1y^7z^3}{6x^9y^2}$

$= \frac{2x^{\cancel{3}}z^3}{3\ y^5}$

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