(a) $y = 3x + 1$ | $2y = 6x - 7$ → solve for y

$y = 3x - \frac{7}{2}$

with equal slopes, the graphs of the corresponding functions are **parallel**

(b) $y + 3x = 1$ | $y = \frac{1}{3}x + 1$

$y = -3x + 1$

with slopes that are negative reciprocals of one another, the graphs of the corresponding functions are **perpendicular**

(c) $2x + 5y = 4$

$5y = -2x + 4$

$y = \frac{-2}{5}x + \frac{4}{5}$ | $x = -\frac{5}{2}y - 7$

$-\frac{5}{2}y = x + 7$

$y = \frac{-2}{5}x - \frac{14}{5}$

with equal slopes, the graphs of the corresponding functions are **parallel**

(d) $y = 2x - 1$ | $y = -\frac{1}{2}x + 3$

with slopes that are negative reciprocals of one another, the graphs of the corresponding functions are **perpendicular**

(e) $y = 7 - x$

$y = -x + 7$ | $y = x + 3$

the slopes are -1 and 1, respectively. since these are negative reciprocals of one another, the graphs of the corresponding functions are **perpendicular**

(f) $y + 3x = 2y - x$

$y = 4x$ | $y = 4x + 1$

with equal slopes, the graphs of the corresponding functions are **parallel**