

[12-02-07A-T]

Line

Answer in standard form.

[1] Find the equation of the line through $P(0, -2)$ that is parallel to the line $5x + y = 3$. Answer in standard form.

[2] Find the equation of the line through $P(2, -7)$ that is perpendicular to the line $y = -2x - 3$. Answer in standard form.

[3] Find the y -intercept of the line through $P(-3, 5)$ that is parallel to the line $y = 2x - \frac{1}{117}$.

[4] Find the point of intersection of the lines $\ell_1 : y = -3x + 4$ and $\ell_2 : y = 3x + 2$. If the lines do not intersect, say so. If the lines are the same line, say so.

[5] Find the point of intersection of the lines $\ell_1 : y = -\frac{3}{7}x + 123$ and $\ell_2 : y = -\frac{3}{7}x + \frac{139}{2}$. If the lines do not intersect, say so. If the lines are the same line, say so.