

8.6**Challenge Practice**

For use with pages 419–425

Write an equation of the line that passes through the given points.

1. $\left(\frac{1}{3}, \frac{1}{2}\right), \left(0, \frac{5}{2}\right)$ 2. $\left(0, -\frac{8}{3}\right), \left(-\frac{7}{2}, \frac{1}{4}\right)$ 3. $(0.8, 4.3), (0, -2.1)$

Write an equation of the line that is parallel to the given line and passes through the given point.

4. Given line: Passes through $(3, 5)$ and $(0, -1)$; Given point: $\left(0, \frac{3}{2}\right)$
5. Given line: Passes through $(0, -5)$ and $(3, -7)$; Given point: $(0, 4)$

Write an equation of the line that is perpendicular to the given line and passes through the given point.

6. Given line: Passes through $(0, -6)$ and $(8, -1)$; Given point: $(0, -2)$
7. Given line: Passes through $(0, 2)$ and $(6, -6)$; Given point: $(0, -3)$
8. Determine whether the line passing through $(3, 6)$ and $(0, 2)$ is parallel, perpendicular, or neither parallel nor perpendicular to the line passing through $(0, -1)$ and $(8, 5)$.
9. Write an equation of the line passing through $(-3, 4)$ and $(2, -1)$. Describe the method you used to determine the equation.