

Partial Review

1. Solve $x^2 + 2x - 2 < 1$.
2. Does the equation $4b - 7 = 2a^2b + 15a$ determine b as a function of a ? Show your work.
3. Determine $g(2 - |b|)$ given that $g(t) = \begin{cases} 4t - 7, & \text{if } t < 5 \\ 3 - t, & \text{if } t \geq 5 \end{cases}$
4. Find an equation of the line passing through the point $(2, -5)$ that is perpendicular to the line given by $3x + 4y = 9$.
5. The Zia Cookie Company sold 14,400 cookies in 1997 and 21,600 cookies in 2002. Assuming linear growth, write an equation for the number of cookies sold as a function of the year.
6. In the context of this application, interpret the slope of your equation for the Zia Cookie Company.
7. According to your linear model (equation), how many cookies did the Zia Cookie Company sell in 2005?
8. Solve $\frac{3x}{x-1} \leq \frac{x}{x+4} + 3$.
9. Determine the domain of the function given by $f(x) = \frac{\sqrt{25-x^2}}{2x+5}$.
10. Determine the values of t for which $f(t) = g(t)$ given that $f(t) = 4t^3 + 9t^2$ and $g(t) = 4t^2 + 6t$.