1. Find the domain of \( f(x) = \frac{x-1}{x^2-x-6} \).

2. Find the domain of \( g(x) = \frac{1}{\sqrt{x}} \).

3. Find the range of \( h(x) = \frac{1}{x} \).
4. Find the slope of the line above.

5. Write an equation for the line passing through the points \((1, 3)\) and \((-2, -5)\).
6. Factor the polynomial \( f(x) = x^2 + 8x - 9 \) into linear factors.

7. Find the roots of the polynomial \( f(x) = 10x^2 + x - 3 \).

8. The hypotenuse of a particular right triangle has length 3. One of the legs of the triangle has length \( \frac{3}{2} \). Find the length of the third leg of the triangle.
9. Find \( \sin \frac{5\pi}{6} \).

10. Find \( \cos \frac{7\pi}{4} \).

11. Find \( \cot \frac{7\pi}{6} \).