Short Tasks: Seeing Structure in Expressions

1. If $x$ is positive and $x \neq 1$, simplify $\frac{\sqrt{x}}{x^3}$.

2. Simplify: $\sqrt{x + 2} + \sqrt{4x + 8}$.

3. For all real numbers $x$, $(3x + 2)(2x - 5) = ax^2 + kx + n$. Find the values of $a$, $k$, and $n$.

4. By factoring, find the zeros of $f(x) = x^2 + 3x - 4$.

5. By completing the square in $x^2 - 2x + 3$, find the minimum value of $f(x) = x^2 - 2x + 3$. 