1a. Find all critical points of the function $f(x) = 3x^{2/3} - 2x$.

$$f'(x) = \frac{2}{3} \cdot 3x^{-1/3} - 2 = 2x^{-1/3} - 2$$

Critical points are where the derivative is zero or undefined. $f'(0)$ is undefined, so $x = 0$ is a critical point. We also have:

$$f'(x) = 2x^{-1/3} - 2 = 0$$
$$x^{-1/3} = 1$$
$$x = 1$$

Therefore the critical points are $x = 0, 1$.

1b. Find the absolute maximum and absolute minimum of $f(x) = 3x^{2/3} - 2x$ for $-1 \le x \le 1$.

The absolute maximum and minimum occur at the critical points or at the endpoints of the interval.

$$f(-1) = 3(-1)^{2/3} - 2(-1) = 3 + 2 = 5$$
$$f(0) = 3(0)^{2/3} - 2(0) = 0 - 0 = 0$$
$$f(1) = 3(1)^{2/3} - 2(1) = 3 - 2 = 1$$

Therefore the absolute maximum is 5 and the absolute minimum is 0.