1(a). Solve \(|t + \frac{7}{2}| < \frac{3}{2}\). Write the answer with two inequalities and no absolute value signs.

\[-5 < t < -2\]

1(a). Write as one inequality with an absolute value: \(x \leq -3\) or \(4 \leq x\).

\(|x - \frac{1}{2}| \geq \frac{7}{2}\)

2. Let \(g(x) = \frac{x}{x}\). What is the domain of \(g\) and what is \(g(2)\).

Domain: \(x \neq 0\). \(g(2) = 1\)

3. Find all real numbers \(E\) such that \(17E^2 + 25E + 10 - E^3 = E^2 + E + 1 - E^3\).

\(E = -\frac{3}{4}\)

4. Factor \(25b^3 + 30b^2 + 9b\).

\(b(5b + 3)^2\)

5. Simplify \(\sqrt[3]{8b^6}\).

\(2b^2\)

6. Solve for \(d\): \(\frac{6^{3/2}}{(\sqrt{2})^3} = d^{1/2}\).

\(d = 27\)

7. Complete the square for \(20q^2 - 5q + 12\).

\(20(q - \frac{1}{8})^2 + \frac{187}{16}\)

8. Expand \((a + 3)^2(a - 2) - 5(a + 1)\) and then simplify with no parentheses in the final answer.

\(a^3 + 4a^2 - 8a - 23\)