1. Solve the inequalities $6 \leq 2 + |3x + 3|$
express your solution sets using interval notation.

$(-\frac{7}{3}, \frac{1}{3})$

$[-\frac{7}{3}, \frac{1}{3}]$

$(-\infty, -\frac{7}{3}] \cup [\frac{1}{3}, +\infty)$

$(-\infty, -\frac{7}{3}) \cup (\frac{1}{3}, +\infty)$

Solution

Intervals

Solve:

$6 \leq |3x + 3| + 2$

$4 \leq |3x + 3|$

$4 \leqslant 3x + 3$ or $3x + 3 \leqslant -4$

$4 - (3) \leqslant 3x$ or $3x \leqslant -4 - (3)$

$1 \leqslant 3x$ or $3x \leqslant -7$

Divide each side by 3

$6 \leq |3x+3| + 2$

$x \leq -\frac{7}{3}$ or $x \geq \frac{1}{3}$