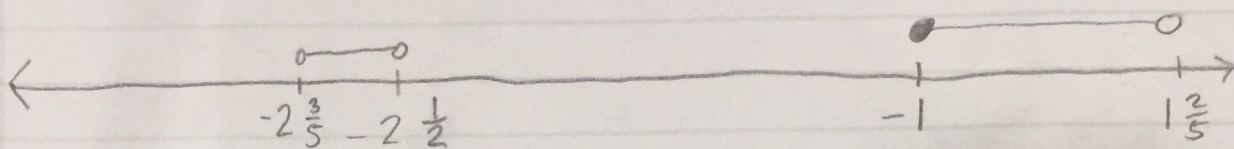


$$-2.5, -1$$

$$4) |2b+5| + |-3b-3| < 15$$



$$\text{Region A: } b < -2.5$$

$$-(2b+5) + (-3b-3) < 15$$

$$-2b+5 -3b-3 < 15$$

$$-5b+2 < 15$$

$$-5b < 13$$

$$b > -2 \frac{3}{5}$$

$$\therefore -2 \frac{3}{5} < b < -2 \frac{1}{2}$$

$$\text{Region B: } -2.5 \leq b < -1$$

$$(2b+5) + (-3b-3) < 15$$

$$2b+5 -3b-3 < 15$$

$$-b+2 < 15$$

$$-b < 13$$

$$b > -13$$

\therefore No Solution

$$\text{Region C: } -1 \leq b$$

$$(2b+5) - (-3b-3) < 15$$

$$2b+5 +3b+3 < 15$$

$$5b+8 < 15$$

$$5b < 7$$

$$b < 1 \frac{2}{5}$$

$$\therefore -1 \leq b < 1 \frac{2}{5}$$

$$\therefore -2 \frac{3}{5} < b < -2 \frac{1}{2}$$

$$\therefore -1 \leq b < 1 \frac{2}{5}$$

Graph is at the top

$$\begin{aligned}
 1) & (2k+3)^2 - (k-3)^2 \\
 &= (4k^2 + 12k + 9) - (k^2 - 6k + 9) \\
 &= 4k^2 + 12k + 9 - k^2 + 6k - 9 \\
 &= 3k^2 + 18k \\
 &= 3k(k+6)
 \end{aligned}$$

$$2) \frac{(15t+2)}{(5t-3)(5t-3)} + \frac{(5-3t)}{(5t-3)(t-1)}$$

$$= \frac{(15t+2)(t-1)(5-3t)(5t-3)}{(5t-3)(5t-3)(t-1)}$$

$$= \frac{40t-36}{(5t-3)^2(t-1)}$$

$$= \frac{4(10-9)}{(5t-3)^2(t-1)} \quad t \neq 3, 5, 1$$

$$3) \frac{(x^4-16)}{(x-3)(x+5)} \times \frac{(x)(x-3)(x-1)}{(5)(x-1)(x+2)} \times \frac{(2x+1)(x+5)}{(x^3)(x-2)}$$

$$= \frac{(x^4-16)(x)(x-3)(x-1)(2x+1)(x+5)}{(x-3)(x+5)(5)(x-1)(x+2)(x^3)(x-2)}$$

$$= \frac{(x^4-16)(x)(2x+1)}{(5)(x+2)(x^3)(x-2)}$$

$$= \frac{(x^2+4)(2x+1)}{5x^2}$$

$$x \neq 3, -5, 1, -2, 2$$