

Notes:

LINEAR INEQUALITIES

SOLVE $3x - 2 < 3$

1) ADD 2 TO BOTH SIDES

$$3x < 5$$

2) DIVIDE BOTH SIDES BY 3

$$x < \frac{5}{3}$$

LINEAR INEQUALITIES 2

SOLVE $-3x - 2 < 3$

1) ADD 2 TO BOTH SIDES

$$-3x < 5$$

2) DIVIDE BOTH SIDES BY -3

(SWAP $<$ TO $>$ WHEN DIVIDING BY A NEGATIVE NUMBER)

$$x > \frac{5}{3}$$

LINEAR INEQUALITIES 3

PLOT $y < 3x + 2$

1) PLOT $y = 3x + 2$

(GRADIENT = 3)
(INTERCEPT = 2)

2) THE LINE IS DASHED
AS THE INEQUALITY
IS STRICT

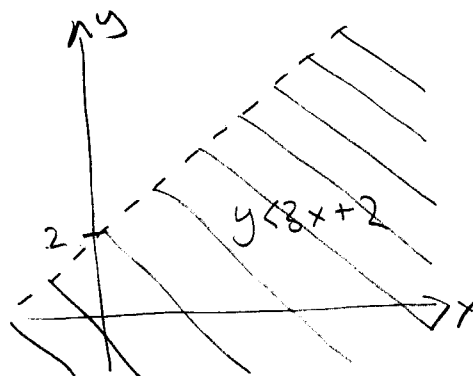
3) DOES THE POINT
(0,0) SATISFY THE INEQUALITY

- CHECK BY SUBSTITUTION

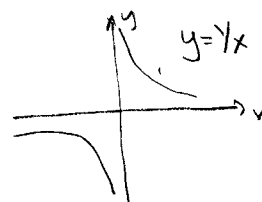
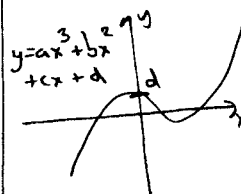
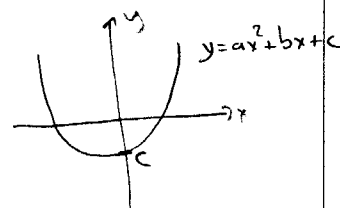
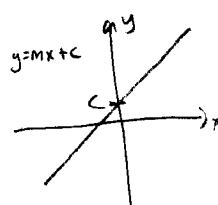
$$0 < 3 \cdot 0 + 2$$

SO YES

4) PLOT IT (THE 'TRUE'
REGION CONTAINS POINT (0,0))



HARDER GRAPHS



Comments: