Torpoint Community College Mathematics

TORPOINT COMMUNITY COLLEGE

Inspiring Optimistic Learners

HIGHER TIER Module 20
Linear Equations and Inequalities

less than $<$	$>$ greater than
less than or equal to $\leqslant$	$\geqslant$ greater than or equal to

$3(y+2) = 5(y-6)$

$3y + 6 = 5y - 30$

$3y - 5y = -30 - 6$

$\frac{-2y}{-2} = \frac{-36}{-2}$

$4x + 3 < 13$

$4x < 13 - 3$

$4x < 10$

$x < \frac{10}{4}$

$x < 2.5$

$9n - 6 = 5n + 18$

$-5n \quad -5n$

$4n - 6 = 18$

$+6 \quad +6$

$4n = 24$

$n = 6$

Solve $\frac{5x+1}{x-1} = 8$

$(x-1) \times \frac{5x+1}{x-1} = 8 \times (x-1)$

$5x + 1 = 8(x-1)$

$5x + 1 = 8x - 8$

$5x - 5x + 1 = 8x - 5x - 8$

$1 = 3x - 8$

$1 + 8 = 3x - 8 + 8$

$9 = 3x$

$9 \div 3 = 3x \div 3$

$x = 3$

$\frac{x}{5} + 7 = -3$

$\frac{x}{5} + 7 - 7 = -3 - 7$

$\frac{x}{5} = -10$

$\frac{x}{5}(5) = -10(5)$

$x = -50$

$31 < 3x + 1 \leqslant 49$

$30 < 3x \leqslant 48$

$10 < x \leqslant 16$

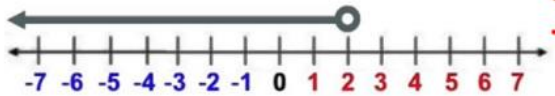
$4 - 2x > 10$

$4 - 10 > 2x$

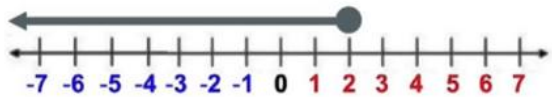
$-6 > 2x$

$-3 > x$

$x < -3$



$x < 2$



$x \leqslant 2$

Key Vocabulary: Term, Expression, Equation, Formula, Function, Identity, Brackets, Powers, Substitution, Solve, Solution, Rearrange, Inequality, Region

Key Websites:

www.mymaths.co.uk login is torpoint, see teacher for password

www.mrbartonmaths.com www.corbettmaths.com

www.justmaths.co.uk www.missbsresources.com

www.onmaths.com www.mathsgenie.co.uk www.nrich.maths.org