# 1.4 Write Equations & Inequalities

- Translations again!!

Equations have $=$, inequalities have $>, \geq, \leq, <$
(equal) (not equal)

| | |
|---|---|
| $=$ | is equal to, is, same as |
| $<$ | is less than, fewer than |
| $\leq$ | is less than or equal to, at most, no more than |
| $>$ | is greater than, more than |
| $\geq$ | is greater than or equal to, at least, no less than |

Example - Translate

(a) 8 less than twice a # k is less than 12

$2k - 8 < 12$

(b) The product of 6 and n is 24.

$6n = 24$

(c) y is no less than 5 and no more than 13

$y \geq 5$ & $y \leq 13$ or $5 \leq y \leq 13$

Function? or not

## Is it a solution? (Does it make it true?)

$z = 3$

① $8 - 2z = 2$

$8 - 2(3) = 2$

$8 - 6 = 2$

$2 = 2$ Solution

② $2z + 5 > 12$

$2(3) + 5 > 12$

$6 + 5 > 12$

$11 > 12$ → Not a solution

$11 \not> 12$

③ $4z - 5 = 6$

$4(3) - 5 = 6$

$12 - 5 = 6$

$7 = 6$

$7 \neq 6$ Not a solution

④ $5 + 3z \leq 20$

$5 + 3(3) \leq 20$

$5 + 9 \leq 20$

$14 \leq 20$ → Yes... Solution

p 24: 6-11, 13, 16, 17-27odd, 40, 41