

Pg 27-28

9	not a solution	35	5
11	solution	37	8
13	not a solution	39	9
15	solution	41	21
27	not a solution	42	2
29	solution	45	5
31	solution	47	6
33	solution	49	D
		50	25

# 1.4 cont. Inequalities

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- Inequalities: a statement formed by placing an inequality symbol between two expressions.

\* Must have an Inequality Sign.

Inequality	Meaning	Example
$<$	less than	$4 < 6$
$>$	greater than	$5 > 4$
$\leq$	less than or equal to	$4 \leq 6$ $4 \leq 4$
$\geq$	greater than or equal to	$4 \geq 3$ $3 \geq 3$

Check Let  $x=4$

$$x+3 \geq 9 \rightarrow \text{exp.}$$

$$\begin{array}{l} (4)+3 \geq 9 \rightarrow \text{sub.} \\ \hline 7 \not\geq 9 \end{array}$$

False...  
4 is not a solution

$$2x-1 < 8$$

$$\begin{array}{l} 2(4)-1 < 8 \\ \hline 8-1 < 8 \end{array}$$

$$\begin{array}{l} 7 < 8 \checkmark \end{array}$$

True...  
4 is a solution

Check  $n$  for  $3n-4 \leq 8$

Start at  $n=2$ :  $3(2)-4 \stackrel{?}{\leq} 8$

$$\begin{array}{r} 6 \\ -4 \\ \hline 2 \end{array} \stackrel{?}{\leq} 8$$

$$2 \leq 8 \quad \checkmark \text{ True.}$$

try  $n=3$   $3(3)-4 \stackrel{?}{\leq} 8$

$$\begin{array}{r} 9 \\ -4 \\ \hline 5 \end{array} \stackrel{?}{\leq} 8$$

$$5 \leq 8 \quad \checkmark \text{ True.}$$

try  $n=4$ :  $3(4)-4 \stackrel{?}{\leq} 8$

$$\begin{array}{r} 12 \\ -4 \\ \hline 8 \end{array} \stackrel{?}{\leq} 8$$

$$8 \leq 8 \quad \checkmark \text{ True.}$$

try  $n=5$   $3(5)-4 \stackrel{?}{\leq} 8$

$$\begin{array}{r} 15 \\ -4 \\ \hline 11 \end{array} \stackrel{?}{\leq} 8$$

$$11 \leq 8 \quad \text{False.}$$

$$\underline{\underline{n \leq 4}}$$

## Real Life Math:

\* Cat: needs less than or equal to 500 cal. a day

\* 2 Feedings

Does 250 cal per feeding work?

$$(\text{\# of feedings})(\text{\# of cal}) \leq 500$$

$$(2)(250) \stackrel{?}{\leq} 500$$

$$\begin{array}{r} \underline{500} \leq 500 \checkmark \end{array}$$

True... 250 cal's work!

O.T.L.: work done  
in Class + Finished  
if Needed Somewhere else.

O.T.L.

① Pg 27-29: 1-7 (0); 17-25 (0);  
51-57 (0); 61, 63;  
65-91 (odd)