Curriculum Outcome

PR1: . Generalize a pattern arising from a problem-solving context using linear equations and verify by substitution.

PR3. Model and solve problems using linear equations of the form:

$ax = b; = b$, $a \neq 0$; $ax + b = c$; $+b = c$, $a \neq 0$; $= b$, $x \neq 0$ ax ax xa

$ax + b = cx + d$; $a(bx + c) = d(ex + f)$; $a(x + b) = c$; $ax = b + cx$

concretely, pictorially and symbolically, where a, b, c, d, e, and f are   rational numbers

Student Friendly: Replacing the equal sign with an inequality sign (ie. <, >)

Feb 15-7:58 AM

Warm Up

Quiz Time

Feb 11-7:47 AM

Class/Homework

Any Questions????

Last nights homework

Text book questions

or worksheet questions

Feb 24-9:54 PM

Section 6.3

Introduction to Linear Inequalities

What is an inequality?

Tallest man 7 feet 9 inches or 2.36m tall $>$ Smallest man 29 inches or 0.74m tall

We use inequalities to model situations
that can be described by a
range of numbers instead of a single number.

"Pick a number greater than 7."

Feb 28-10:49 AM

2

When one quantity is....

less than
$<$
5 < 10

greater than
$>$
10 > 5

less than or equal to
$\leq$

greater than or equal to
$\geq$

(P)
30 min
9 AM – 6 PM
◄ MON-FRI ►

Which of these inequalities describes the time,
t minutes, for which a car could be legally parked?

a) t > 30   b) t ≥ 30

c) t < 30   d) t ≤ 30

Feb 28-11:28 AM

Define a variable and write an inequality for each of the following situation:

SPEED LIMIT 55

Variable: *s,* speed

Inequality: s ≤ 55

Store at temperatures below 4°C

Variable: *t,* temperature

Inequality: t < 4

Height Restriction
You must be at least 102 cm to go on this ride.

Variable: *h,* height

Inequality: h ≥ 102

Canadian Home Video 14A Rating

Variable: *a,* age

Inequality: a ≥ 14

Feb 28-11:34 AM

$$\neq$$

Does not equal

$$x \neq 5$$

3   4   5   6   7
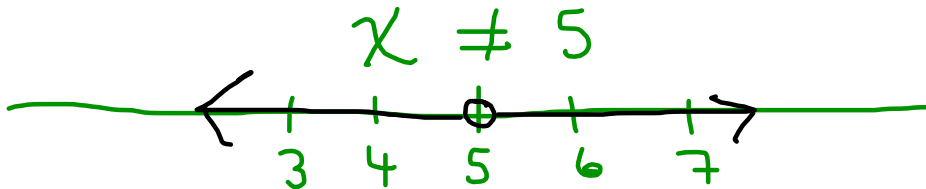
Feb 19-9:31 AM

CAPTAIN ANSWER

Determining whether a number is a solution to an inequality

Is each number a solution of the inequality $b \geq -4$?
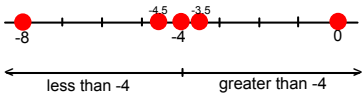
-8   -3.5   -4   -4.5   0

We can do this in TWO different ways:

Method 1: Using a Number Line

Show all numbers on a line.

The solution of $b \geq -4$ is all numbers that are greater than (to the right) or equal to -4.

-4.5   -3.5

-8   -4   0

← less than -4   greater than -4 →

Method 2: Use Substitution.

Substitute each number for b in the inequality $b \geq -4$.

Determine whether the resulting inequality is true or false.

a) Since $-8 \geq -4$ is false, -8 is not a solution.
b) Since $-3.5 \geq -4$ is true, -3.5 is a solution.
c) Since $-4 = -4$, -4 is a solution.
d) Since $-4.5 \geq -4$ is false, -4.5 is not a solution.
e) Since $0 \geq -4$ is ture, 0 is a solution.

Feb 28-11:44 AM