

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:

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

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

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

Student Friendly: Chapter 6 Test Review

<p>Examples: Solve for x</p> <p>1) $7 - 6x = 85$</p>	<p>Fraction multiply by the common denominator</p> <p>2) $\frac{-6x + 7}{4} = \frac{4}{5}$</p>	<p>"x" on opposite sides</p> <p>3) $10x + 4 \leq -2x - 32$</p>
<p>Brackets</p> <p>4) $6(x-3) > 30$</p>	<p>5) Bracket and Fractions</p> <p>$\frac{2(x+3)}{3} = 5(x-1)$</p>	<p>6) Negative inequalities</p> <p>$-3x < 12$</p>

Warm Up

Examples:

Solve for x

$$1) 7 - 6x = 85$$

$$\frac{-6x}{-6} = \frac{78}{-6}$$

$$x = -13$$

$$-13x + 6 = -15$$

$$-13x = -21$$

$$\frac{-13x}{-13} = \frac{-21}{-13}$$

$$x = \frac{21}{13}$$

Fraction multiply by the
common denominator

$$2) \frac{-6x + 7}{4} = \frac{4}{5}$$

$$\frac{-120x + 140}{4} = \frac{80}{5}$$

$$\boxed{-30x} + 140 = 16$$

$$-30x + \cancel{140} = 16 \quad \cancel{-140}$$

$$\frac{-30x}{-30} = \frac{-124}{-30}$$

$$x = \frac{62}{15}$$

"x" on opposite sides

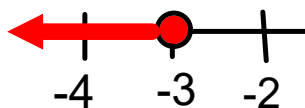
$$3) \boxed{10x} + 4 \leq \boxed{-2x} - 32$$

$$10x + 4 \leq -2x - 32$$

$$\boxed{12x} + 4 \leq -32$$

$$\frac{12x}{12} \leq \frac{-36}{12}$$

$$x \leq -3$$



Brackets

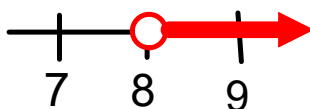
$$4) 6(x-3) > 30$$

$$\boxed{6x} - 18 > 30$$

$$6x - 18 > 30$$

$$\frac{6x}{6} > \frac{48}{6}$$

$$x > 8$$



5) Bracket and Fractions

$$\frac{2(x+3)}{3} = 5(x-1)$$

$$\frac{2x}{3} + \frac{6}{3} = 5x - 5$$

$$\frac{2x}{3} + \frac{6}{3} = 5x - 5$$

$$\frac{6x}{3} + \frac{18}{3} = 15x - 15$$

$$\boxed{2x} + 6 = \boxed{15x} - 15$$


$$-13x + 6 = -15$$

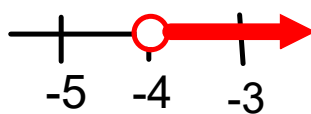
$$\frac{-13x}{-13} = \frac{-21}{-13}$$


$$x = \frac{21}{13}$$

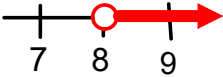
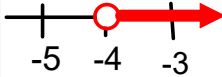
6) Negative inequalities

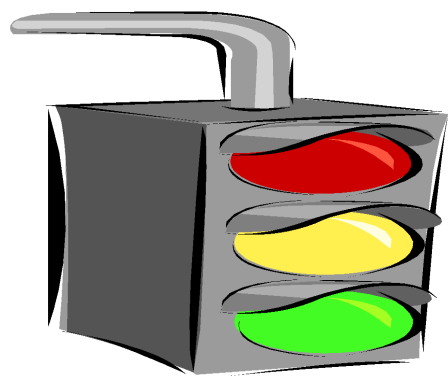
NOTICE
INQUALITY
CHANGED

$$\frac{-3x}{-3} < \frac{12}{-3}$$

$$x > -4$$

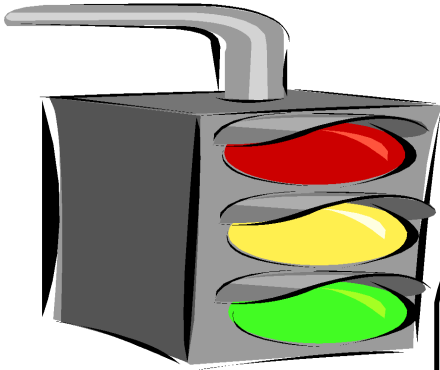


<p>Examples: Solve for x</p> <p>1) $7 - 6x = 85$</p> $-6x = 78$ $\frac{-6x}{-6} = \frac{78}{-6}$ $x = -13$	<p>Fraction multiply by the common denominator</p> <p>2) $\frac{-6x}{4} + 7 = \frac{4}{5}$</p> $\frac{-120x + 140}{4} = \frac{80}{5}$ $-30x + 140 = 16$ $-30x + 140 = 16 - 140$ $-30x = -124$ $\frac{-30x}{-30} = \frac{-124}{-30}$ $x = \frac{62}{15}$	<p>"x" on opposite sides</p> <p>3) $10x + 4 \leq -2x - 32$</p> $10x + 4 \leq -2x - 32$ $12x + 4 \leq -32$ $12x \leq -36$ $\frac{12x}{12} \leq \frac{-36}{12}$ $x \leq -3$ 
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<p>Brackets</p> <p>4) $6(x-3) > 30$</p> $6x - 18 > 30$ $6x - 18 + 18 > 30 + 18$ $6x > 48$ $\frac{6x}{6} > \frac{48}{6}$ $x > 8$ 	<p>5) Bracket and Fractions</p> $\frac{2(x+3)}{3} = 5(x-1)$ $\frac{2x}{3} + \frac{6}{3} = 5x - 5$ $\frac{2x}{3} + \frac{6}{3} = 5x - 5$ $\frac{6x}{3} + \frac{18}{3} = 15x - 15$ $2x + 6 = 15x - 15$ $2x + 6 = 15x - 15$ $-13x + 6 = -15$ $-13x = -21$ $\frac{-13x}{-13} = \frac{-21}{-13}$ $x = \frac{21}{13}$	<p>6) Negative inequalities</p> <p>NOTICE INEQUALITY CHANGED</p> $-3x < 12$ $\frac{-3x}{-3} \frac{12}{-3}$ $x > -4$ 
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Now it is
time for
Home
Learning



Class/Homework

Test Review Questions

Page 308 - 309

Page 310(Practice test)

#3 #10
#4 #15
#7 #16
#9

#2
#3
#4
#5
#6

As well you have a Worksheet

Test will be next class

Solving Equations (Section 6.1-6.2)

Name _____

Date _____

Period _____

Solve each equation. (Show all work)

1) $-4 = 2(x - 6)$

2) $-54 = n + 4(n - 6)$

3) $5(1 - 7m) = 40$

4) $-6(2 + 7r) = -54$

5) $-12 = -4 + 8(5x - 1)$

6) $5(n + 1) = 45$

7) $10b - 32 - 2b = -4(2 + b)$

8) $-2(1 + 4v) = -6(3 + v)$

9) $-2 = \frac{-3 + x}{8}$

10) $2 = \frac{2}{3} + \frac{x}{4}$

11) $\frac{2}{5}(x - 7) = \frac{1}{4}(2x - 1)$

12) $-7 - 9k = 29$

- 13) Ted and Fred each have a Tractor Trailer Cleaning Business. Ted charges \$32 per hour and a flat rate of \$44 to clean a truck. Fred on the other hand charges a flat rate of \$100 and \$24 per hour to clean a truck. Use an equation to find out when they charge the

90

Math 9

Inequalities ICA

Solve and graph. (Section 6.3-6.5)

Name _____

Per/Sec. _____ Date _____

Show all work

1. $-3y \geq 24$



2. $-2c \leq 26$



3. $4 - c < 16$



4. $15 < -k + 8$



5. $3k + 8 \geq 17$



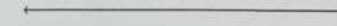
6. $-9 \leq 2a - 25$



7. $21 < -4 - 5a$



8. $-3k + 14 < 2$



9. $-9x + 71 \geq 17$



10. $-25 < -4c - 13$



Write a scenario for each situation.

1) Karen needs to make a mark of at least 87 on his Math exam in order to pass the course.

2) Ted has a lemonade stand and it cost him \$3.15 to buy his cups and juice. He wants to buy an action figure for \$8.25 so he decided to sell his lemonade for \$0.57 per cup. Write an inequality that represents the situation. (Solve it)

Unit 6-Equations & Inequalities Test Review (Day 2)

Part 1) Solve each of the following.

1) $4(x-1) + 4x = 2(3x+1)$

2) $\frac{1}{2}(4x+2) = \frac{1}{3}(x-1)$

3) $\frac{1x}{15} + \frac{1}{3} + \frac{2x}{5} + 4 = \frac{2}{15}$

4) $3.2(x+7.2) = 1.2(4.2-x)$

5) $3x-2+5x = 19$

6) $12x+5 = 50-3x$

Part 2) Solve and graph each inequality

1) $3x+7 \geq 4x+18$

2) $18x-10 < 44$

3) $\frac{1}{2}(x+7) \leq 2(3x-1)$

4) $-12 > \frac{2}{3}c+4$

Part 3) Write the inequality that describes the situation and SOLVE

- 1) To cater a wedding Company A charges \$40 a plate and Company B charges \$15 plus a flat rate of \$300. When is it COMPANY B less than Company A?

- 2) Each class room in school can have no more than 29 students: _____
- 3) The minimum fine for speeding is \$172.50 : _____
- 4) In order to pass the next test you must make a mark of 60 or greater: _____

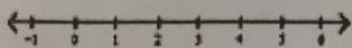
Solve each equation.

$$1) -7(2b+3) = -7$$

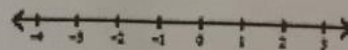
$$2) 47 = -4(3n+1) + 3$$

Solve each inequality and graph its solution.

$$3) 20 < 5(1+x)$$



$$4) 6(1+4v) + 4v \leq -22$$



Chapter 6 : Test Review WorksheetsSolving Equations (Section 6.1-6.2)

Answers :

1) $x=4$ 2) $n=-6$ 3) $m=-1$ 4) $r=1$ 5) $x=0$

6) $n=8$ 7) $b=2$ 8) $v=8$ 9) $x=-13$ 10) $x=\frac{16}{3}$

11) $x=\frac{-51}{2}$ 12) $k=-4$ 13) $h=7$

Inequalities ICA (Section 6.3-6.5)

Answers :

1) $y \leq 8$ 2) $c \geq -13$ 3) $c > -12$ 4) $k < -7$ 5) $k > 3$

6) $a \geq 8$ 7) $a < -5$ 8) $k > 4$ 1) $m \geq 87$ 2) $c > 20$

Unit 6 - Equations & Inequalities (Test review day 2)

Answers :

Part A

1) $x=3$ 2) $x=\frac{-4}{5}$ 3) $x=-9$ 4) $x=-4.0\bar{9}$ 5) $x=\frac{21}{8}$ 6) $x=3$

Part B

1) $x \leq -11$ 2) $x < 3$ 3) $x \geq 1$ 4) $c < -24$

Part C

1) $p > 12$ 2) $c \leq 29$ 3) $m \geq 172.50$ 4) $m \geq 60$

Part D

1) $b=-1$ 2) $n=-4$ 3) $x > 3$ 4) $v \leq -1$