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DAILY QUEST

1) Jim has $40 to spend at the fair. If it costs $5 for admission and $2.50 per ride, how many rides can Jim ride at the fair? Write and solve an equation for this situation.

$5 + 2.50r = 40$

$-5 \quad -5$

$\frac{2.50r}{2.50} = \frac{35}{2.50}$

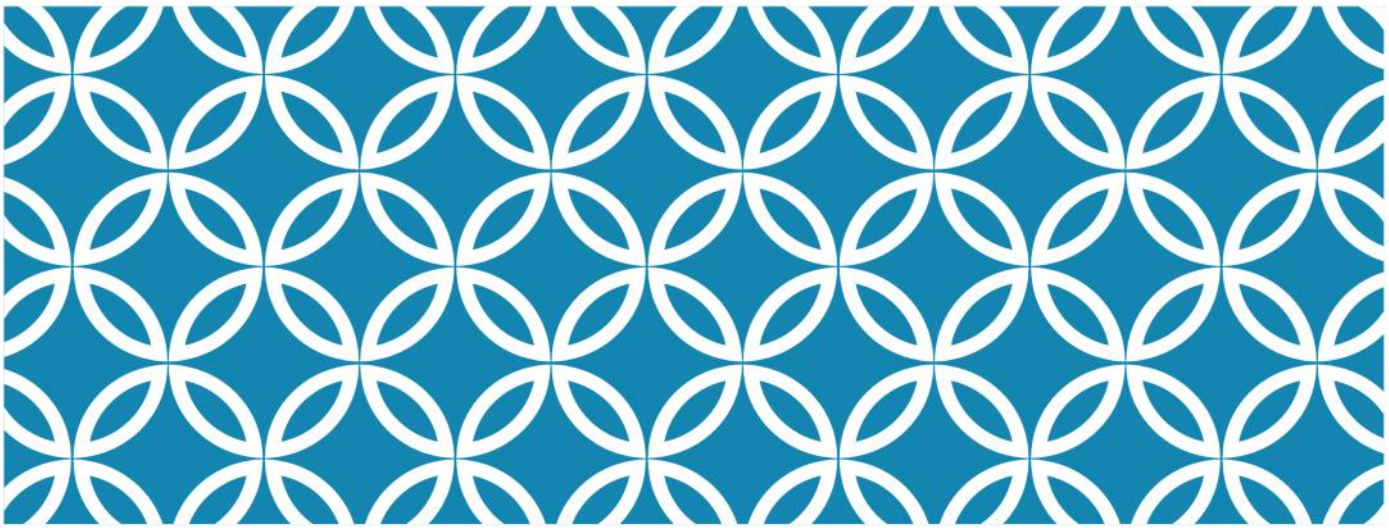
$r = 14$

2) Solve. $6x + 3 = 5 + 6x$

$-6x \quad -6x$

$3 = 5$

No solution



LESSON 4.2
SOLVE INEQUALITIES
SOLVE INEQUALITY WORD PROBLEMS

Goal: To solve equations/inequalities in math and real world context and to write rules for arithmetic sequence.

Obj: SWBAT write/solve inequalities in word problems.

PROBLEM 1:

Solve and graph each inequality.

$1 + 2x \leq 3x - 4$

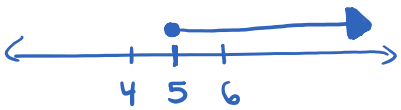
$-3x \quad -3x$

$-1x \leq -4$

$-1 \quad -1$

$\frac{-1x}{-1} \leq \frac{-5}{-1}$

$x \geq 5$



Switch inequality sign when you divide by a (−)

$9 + 6x > 8x - 5$

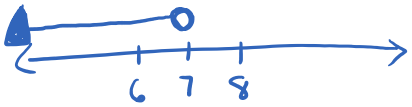
$-8x \quad -8x$

$9 - 2x > -5$

$-9 \quad -9$

$\frac{-2x}{-2} > \frac{-14}{-2}$

$x < 7$



PROBLEM 1A:

Solve and graph each inequality.

$-x - 3 < 15 + 5x$

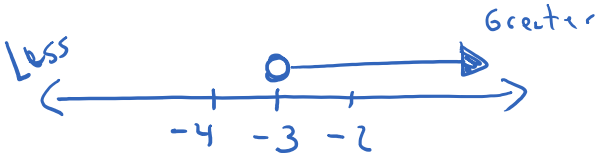
$-5x \quad -5x$

$-6x - 3 < 15$

$+3 \quad +3$

$\frac{-6x}{-6} < \frac{18}{-6}$

$x > -3$



$2x - 6 + 1 - 2 \leq x - 2$

PROBLEM 1B:

Solve and graph each inequality.

$5 - 2x \leq -2x - 7 + 5$

$+2x \quad +2x$

$5 \leq -7 + 5$

$5 \leq -2$

No solution

No graph

$8 + 5x - 7 > -7 + 5x$

$-5x \qquad\qquad 5x$

$8 - 7 > -7$

$1 > -7$

All real numbers

PROBLEM 2:

Solve and graph each inequality.

$-2(1-2x) \geq 3(x-5)$

$-2 + 4x \geq 3x - 15$

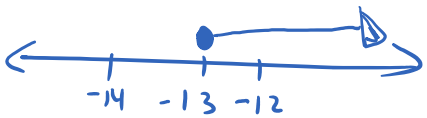
$-3x \quad -3x$

$-2 + 1x \geq -15$

$+2 \quad +2$

$1x \geq -13$

$x \geq -13$



$6(-3x-2) > -2(3x-6)$

$-18x - 12 > -6x + 12$

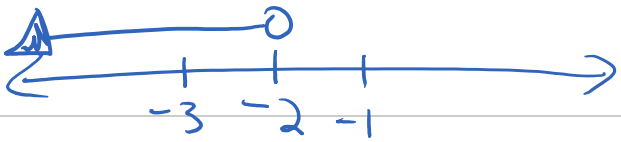
$+6x \quad +6x$

$-12x - 12 > 12$

$+12 \quad +12$

$\frac{-12x}{-12} > \frac{24}{-12}$

$x < -2$



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PROBLEM 2A:

Solve and graph each inequality.

$-5(1-5x) \leq -5(x+1)$

$16 + 28x \geq 7(4x+8)$

PROBLEM 3:

Jimmy has $700 in savings account at the beginning of the summer. He want to have at least $300 in the account by the end of the summer. He withdraws $25 each week for food, clothes and movie tickets. Write an inequality that represents Jimmy situation. How many weeks can Jimmy withdraw money from his account?

PROBLEM 3A:

Amanda is ordering books online. She has $100 to spend. The seller charges 4% of the cost of the books for shipping. What is the most that Amanda's books can cost, before the shipping charge?

PROBLEM 3B:

Your elementary school is having a fall carnival. Admission into the carnival is $3 and each game inside the carnival costs $.25. Write an inequality that represents the possible number of games that can be played having $10. What is the maximum number of games that can be played?

PROBLEM 6:

Chris wants to order DVD's over the internet. Each DVD costs $15.99 and shipping for the entire order is $9.99. Chris has no more than $100 to spend. How many DVD's can Chris buy? Write and solve an inequality that represents Chris' situation.