21 FEB 12

1ST 5

Solve the inequalities.

1) $n+7\le 3n-1$

2) $2(3f+2)>4f+12$

3) $-2(3g-2)+2<-4-4g$

Inequalities Day 6

1) $n+7\le 3n-1$

$-n \quad -n$

$7\le 2n-1$

$+1 \quad +1$

$\frac{8}{2}\le\frac{2n}{2}$

$4\le n$

$n\ge 4$

Inequalities Day 6

2) $2(3f+2)>4f+12$

$6f+4>4f+12$

$-4f \quad -4f$

$2f+4>12$

$-4 \quad -4$

$\frac{2f}{2}>\frac{8}{2}$

$f>4$

Inequalities Day 6

3) $-2(3g-2)+2<-4-4g$

$-6g+4+2 < -4-4g$

$-6g+6 < -4-4g$

$+4g \quad +4g$

$-2g+6 < -4$

$-6 \quad -6$

$\frac{-2g}{-2} < \frac{-10}{-2}$

$g>5$

Inequalities Day 6

WORKBK P. 40

29. $x\ge 5$ **30.** $z>1$ **31.** $b<6$

32. $y\ge -8$ **33.** $f<1$ **34.** $k<\frac{3}{4}$ **35.** $g\ge 5$

37. $y<0$ **38.** $t>-5$ **39.** $d>3$

40. $n<2$ **41.** $d\le 4$

Inequalities Day 6

29) $\frac{5}{2}\cdot\frac{2}{5}(5x-15)\ge\frac{4}{1}\cdot\frac{5}{2}$ $\quad\frac{20}{2}$

$5x-15\ge 10$

$+15 \quad +15$

$\frac{5x}{5}\ge\frac{25}{5}$

$x\ge 5$

Inequalities Day 6

16 March 2011 **APPLICATIONS** Day 8 Unit 2-2

≤ 680

- The maximum safe load of a chairlift is 680 lb. The weight of a person in the lift is 124 lb, and the weight of the bicycle is 32 lb. How much additional weight can the chairlift safely carry?

Let X is additional weight
person + bicycle + add'l chairlift

$124 + 32 + X \leq 680$ lb

$156 + X \leq 680$

$-156 \quad -156$

$X \leq 524$ lbs

Inequalities Day 6

- Suppose you and a friend are working for a nursery planting trees. Together you can plant 8 trees per hour. What is the greatest number of hours that you and your friend would need to work to plant at most 40 trees?

Let X # of hours

$8X \leq 40$

$\frac{8X}{8} \leq \frac{40}{8}$

$X \leq 5$ hours

Inequalities Day 6

- Your brother has $2000 saved for a vacation. His airplane ticket is $637. Write and solve an inequality to find out how much he can spend for everything else.

Let X be spending money

ticket + spending ≤ 2000

$637 + X \leq 2000$

$-637 \quad -637$

$X \leq \$1363$

Inequalities Day 6

- Students in the school band are selling calendars. They earn $0.40 on each calendar they sell. Their goal is to earn more than $327. Write and solve an inequality to find the fewest number of calendars they can sell and still reach their goal.

Let X # of calendars

$X \geq 818$ calendars

$\frac{.40X}{.40} \geq \frac{327}{.40}$

$X \geq 817.5$

Inequalities Day 6

- You need to buy stamps to mail some letters. The stamps cost $ .34 each. What is the maximum number of stamps that you can buy with $ 3.84?

Let X be the # stamps

$X \leq 11$ stamps

$\frac{.34X}{.34} \leq \frac{3.84}{.34}$

$X \leq 11.29$

Inequalities Day 6

- You have $50 and want to buy a t-shirt that costs $7 and some CD's that cost $14.99 each. How many CD's can you buy?

Let X be # CDs

CDs + shirt ≤ 50

$14.99X + 7 \leq 50$

$-7 \quad -7$

$X \leq 2$ CDs

$\frac{14.99X}{14.99} \leq \frac{43}{14.99}$

$X \leq 2.8$

Inequalities Day 6

- You have $150 and want to buy an MP3 player and then download some songs. The MP3 player costs $39.99 and the cost of each song is $.99. How many songs can you download?

Let x be # songs.

cost player + cost songs ≤ 150

39.99 + .99x ≤ 150

−39.99 −39.99

.99x ≤ 110.01

.99 .99

x ≤ 111.12

x ≤ 111 songs

Inequalities Day 6

21. It will take at least 360 points for Kiko's team to win the math contest. The scores for Kiko's teammates were 94, 82, and 87, but one of Kiko's teammates lost 2 of those points for an incomplete answer. How many points must Kiko earn for her team to win the contest?

≥

x is Kiko's score

94 + 82 + 87 − 2 + x ≥ 360

261 + x ≥ 360

−261 −261

x ≥ 99

Inequalities Day 6

22. This season, Nora has 125 at-bats in softball. By the end of the season she wants to have at least 140 at-bats. How many more at-bats does Nora need to reach her goal?

x

125 + x ≥ 140

x ≥ 15

Inequalities Day 6

24. Suppose it takes no more than 25 min for you to get to school. If you have traveled for 13.5 min already, how much longer, at most, might you take to get to school?

≤

x

13.5 + x ≤ 25

−13.5 −13.5

x ≤ 11.5 min

Inequalities Day 6

22. Suppose the physics club is going on a field trip. Members will be riding in vans that will hold 7 people each including the driver. At least 28 people will be going on the field trip. What is the least number of vans needed to make the trip?

x = # of vans

7x ≥ 28

x ≥ 4 vans

Inequalities Day 6

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Worksheet Inequality Word Problems p. 704 # 17, 18, 20, 24

Inequalities Day 6