

Review: Applications of Inequalities

For each, define a variable, write an inequality, solve.

- 1) John's budget allows him to spend no more than \$30 per week on gas. If a gallon of gas costs \$3.50, how many gallons of gas can he buy for the week?
- 2) Aubrey's scores on the first 4 of five 100 point tests were 85, 89, 90 & 81. What score must she receive on the fifth test to have an average of at least 87% for all the tests?
- 3) A phone company charges \$15 per month & 20¢ per call. If you can spend no more than \$30 per month, then how many calls can you make?

Answers:

- 1) $g = \# \text{ of gallons of gas}$
 $3.5g \leq 30$
 $g \leq 8.57 \text{ gallons}$
John can buy no more than 8.57 gallons of gas

- 2) $x = 5^{\text{th}} \text{ test score}$
 $\frac{85+89+90+81+x}{5} \geq 87$
 $x \geq 90$
Aubrey must score at least 90%.

- 3) $c = \# \text{ of calls}$
 $15 + .2c \leq 30$

- $c \leq 75 \text{ calls}$
You can make at most 75 calls.