

Problem Set

- Match each problem to the inequality that models it. One choice will be used twice.

_____	The sum of three times a number and -4 is greater than 17.	a.	$3x + -4 \geq 17$
_____	The sum of three times a number and -4 is less than 17.	b.	$3x + -4 < 17$
_____	The sum of three times a number and -4 is at most 17.	c.	$3x + -4 > 17$
_____	The sum of three times a number and -4 is no more than 17.	d.	$3x + -4 \leq 17$
_____	The sum of three times a number and -4 is at least 17.		
- If x represents a positive integer, find the solutions to the following inequalities.

a. $x < 7$	b. $x - 15 < 20$
c. $x + 3 \leq 15$	d. $-x > 2$
e. $10 - x > 2$	f. $-x \geq 2$
g. $\frac{x}{3} < 2$	h. $-\frac{x}{3} > 2$
i. $3 - \frac{x}{4} > 2$	
- Recall that the symbol \neq means "not equal to." If x represents a positive integer, state whether each of the following statements is true or false.

a. $x > 0$	b. $x < 0$
c. $x > -5$	d. $x > 1$
e. $x \geq 1$	f. $x \neq 0$
g. $x \neq -1$	h. $x \neq 5$
- Twice the smaller of two consecutive integers increased by the larger integer is at least 25.
Model the problem with an inequality, and determine which of the given values 7, 8, and/or 9 are solutions. Then find the smallest number that will make the inequality true.