DO NOW
Which number is a solution of the inequality
$5x + 16 < 3x - 8$?

(a) 4 (b) -4 (c) -12 (d) -14

$x < -12$

$5x + 16 < 3x - 8$
$-3x \quad -3x$

$\frac{2x}{2} < \frac{-24}{2}$

$2x + 16 < -8$
$-16 \quad -16$
$2x < -24$

(13) $6(x+1) < 3x$ OR $6x > 3(x-1)$

$6x + 6 < 3x$
$-6x \quad -6x$
$\frac{6}{-3} < \frac{-3x}{-3}$
$-2 > x$
$x < -2$

$6x > 3x - 3$
$-3x \quad -3x$
$\frac{3x}{3} > \frac{-3}{3}$
$x > -1$

(18) $5 > 1 - 2r$ and $3r < 2r + 1$

$-1 \quad -1$
$\frac{4}{-2} > \frac{-2r}{-2}$
$-2 < r$
$r > -2$

$-2r \quad -2r$
$r < 1$

(16) $6 \le 8c - 2$ OR $9 \le 1 - 4c$

$+2 \quad +2$
$\frac{8}{8} \le \frac{8c}{8}$
$1 \le c$
$c \ge 1$

$-1 \quad -1$
$\frac{8}{-4} \le \frac{-4c}{-4}$
$-2 \ge c$
$c \le -2$

OR

Oct 11-8:49 AM

Two consecutive odd integers have a sum of more than 26. Find the two smallest odd integers that will make this true.

Let: $x = 1^{st}$ C.O.I. $= \boxed{13}$
$x + 2 = 2^{nd}$ C.O.I. $= \boxed{15}$

$x + x + 2 > 26$
$2x + 2 > 26$
$-2 \quad -2$
$\frac{2x}{2} > \frac{24}{2}$
$x > 12$

Oct 24-12:35 PM

Paul earns $25.00 per hour at his job. Each day he spends $10.00 for lunch. Today he wants to take home at least $215.00 after paying for his lunch. How many hours will he have to work to achieve his goal?

Let: x = number of hours

$25x - 10 \ge 215$
$+10 \quad +10$
$\frac{25x}{25} \ge \frac{225}{25}$
$x \ge 9$

$\boxed{\text{At least 9 hours}}$

Oct 15-10:47 AM

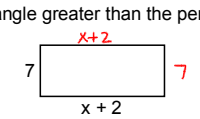
Sally rented a car for $45.00 a week plus $0.12 for each mile the car is driven. What is the greatest number of miles Sally can drive the car if she wishes to spend at most $105.00?

Let: x = number of miles

$.12x + 45 \le 105$
$-45 \quad -45$
$\frac{.12x}{.12} \le \frac{60}{.12}$
$x \le 500$
$\boxed{500 \text{ miles}}$

Oct 15-10:45 AM

For what values of x is the area of the rectangle greater than the perimeter?



Area > perimeter

$7(x+2) > 2(7) + 2(x+2)$
$7x + 14 > 14 + 2x + 4$
$7x + 14 > 18 + 2x$
$-2x \quad -2x$
$5x + 14 > 18$
$-14 \quad -14$
$\frac{5x}{5} > \frac{4}{5}$
$\boxed{x > .8}$

Oct 15-10:48 AM

Sophia types 75 words per minute and is just starting to write a term paper. Patrick already has 510 words written and types at a speed of 60 words per minute. For what number of minutes will Sophia have more words typed than Patrick?

Oct 15-10:50 AM

You rent a car and are offered 2 payment options. You can pay $25 a day plus $0.15 a mile (Option A) or you can pay $10 a day plus $0.40 a mile (Option B). For what amount of daily miles will Option A be the cheaper plan?

Oct 11-11:03 AM

Members of the marching band are planning to sell programs at football games. The cost to print the programs is $150 plus $0.50 per program. They plan to sell each program for $2. How many programs must they sell in order to make a profit?

Oct 11-9:08 AM