Homework Review - 6.5

$$\frac{7}{4}|3j+5|+1=15$$
$$-1 \quad -1$$

$$\frac{4}{7}\cdot\frac{7}{4}|3j+5| = \frac{2}{14}\cdot\frac{4}{7_1}$$

$$|3j+5| = 8$$

$3j+5=8$ or $3j+5=-8$

$-5 \quad -5$ $-5 \quad -5$

$\frac{3j}{3}=\frac{3}{3}$ $\frac{3j}{3}=\frac{-13}{3}$

$j=1$ or $j=-\frac{13}{3}$

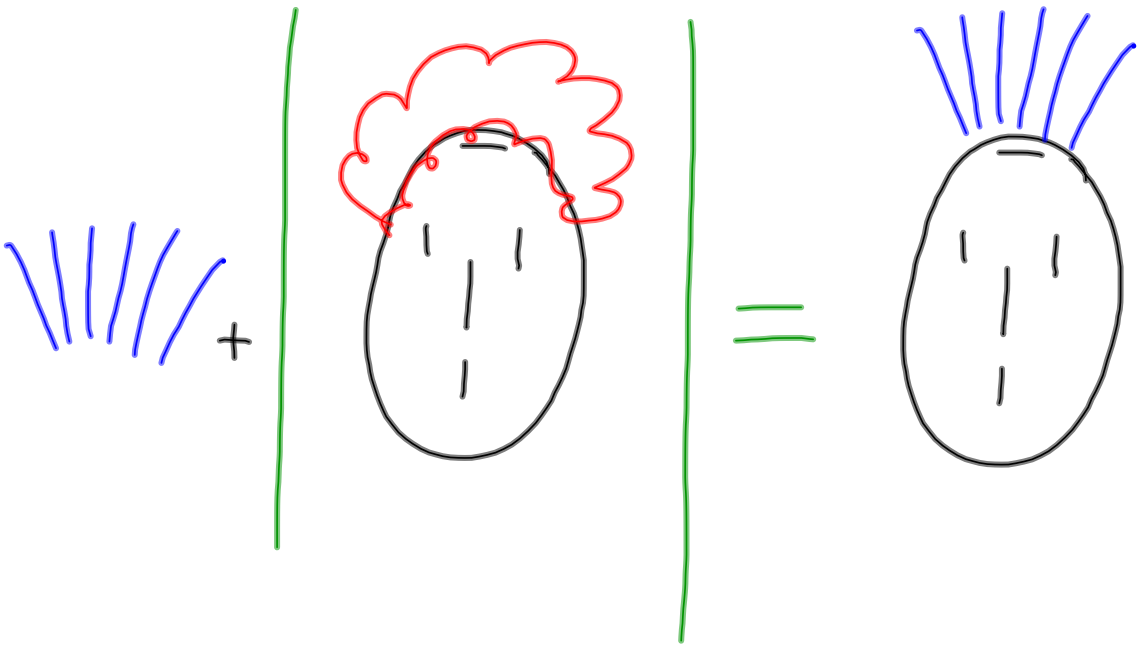
(26) $\frac{-4|8-5n|}{-4} = \frac{13}{-4}$

$|8-5n| = -\frac{13}{4}$

no solution

$\frac{-4b}{-4} = \frac{13}{-4}$

$b = -\frac{13}{4}$



PARKS A rectangular city park has an area of 211,200 square feet. If the length of the park is 660 feet, what is the width of the park?

area = 211,200 ft^2
length = 660 feet
w = width of the park

$A = l \times w$

$$\frac{211,200}{660} = \frac{660 \times w}{660}$$

$$320 = w$$

$4y - 1(y - 4) = -20$

$4y - y + 4 = -20$

$3y + 4 = -20$

$-4 \quad -4$

$\frac{3y}{3} = \frac{-24}{3}$

$y = -8$

$\frac{3}{4} \cdot \frac{4}{3}(2x - 1) = -12 \cdot \frac{3}{4}$

$2x - 1 = -9$

$+1 \quad +1$

$\frac{2x}{2} = \frac{-8}{2}$

$x = -4$

FOOTBALL You purchase 5 tickets to a football game from an Internet ticket agency. In addition to the cost per ticket, the agency charges a convenience charge of $2.50 per ticket. You choose to pay for rush delivery, which costs $15. The total cost of your order is $352.50. What is the price per ticket not including the convenience charge?

5 tickets

2.50 = con. charge (per ticket)

15 = del. cost

352.50 = total cost

p = price per ticket

$$352.50 = 15 + (p + 2.50)5$$

$$352.50 = 15 + 5p + 12.50$$

$$352.50 = 17.50 + 5p$$

$$-27.50 \quad -27.50$$

$$\frac{325}{5} = \frac{5p}{5}$$

$$p = 65$$

$$6(2a + 10) = 5(a + 5)$$

$12a + 60 = 5a + 25$

$-5a \quad -5a$

$7a + 60 = 25$

$-60 \quad -60$

$\frac{7a}{7} = \frac{-35}{7} \Rightarrow a = -5$

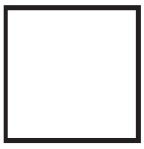
$$4(x - 3) = -2(6 - 2x)$$

$4x - 12 = -12 \quad 4x$ all #'s

GEOMETRY Refer to the square shown.

a. Find the value of x.

b. Find the perimeter of the square.



$6x+5$
$6\cdot4+5$
$24+5$
29

$8x-3$
$8\cdot4-3$
$32-3$
29

$8x-3=6x+5$
$-6x+3 \quad -6x+3$
$\frac{2x}{2}=\frac{8}{2}$
$x=4$

$4\cdot29=116$

b

$$\frac{c+2}{45} = \frac{8}{5}$$

$5c+10=360$
$-10 \quad -10$
$\frac{5c}{5} = \frac{350}{5}$
$c = 70$

PAINTING The label on a can of paint states that one gallon of the paint will cover 560 square feet. How many gallons of that paint are needed to cover 1400 square feet?

$$\frac{1}{560} = \frac{x}{1400}$$

$x = \frac{1400}{560}$
$= 2.\ldots$
$= 3$ cans

What number is 30% of 55?

$\frac{x}{55} = \frac{30}{100}$ $x = 30\% \cdot 55$

What percent of 56 is 21?

$\frac{x}{100} = \frac{21}{56}$ $21 = p\% \cdot 56$

CONCERTS There were 7500 tickets sold for a concert, 20% of which were general admission tickets. How many general admission tickets were sold?

$$\frac{x}{7500} = \frac{20\%}{100\%}$$

$$20 \cdot 7500$$

$3x = 2y - 18$

$+18 \quad -\ +18$

$\frac{3x+18}{2} = \frac{2y}{2}$

$y = \frac{3x+18}{2}$

$= \frac{3x}{2} + \frac{18}{2}$

$y = \frac{3}{2}x + 9$

AQUARIUMS A pet store sells aquariums that are rectangular prisms. The volume V of an aquarium is given by the formula $V = \ell wh$ where ℓ is the length, w is the width, and h is the height.

$\frac{V}{\ell h} = \frac{\ell wh}{\ell h}$

$w = \frac{V}{\ell h}$

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③ $ax = bx + c$; $8x = 3x - 10$

$-bx \quad -bx$

$ax - bx = c$

$\frac{x(a-b)}{(a-b)} = \frac{c}{a-b}$

$x = \frac{c}{a-b}$

$x = \frac{-10}{8-3}$

$= \frac{-10}{5}$

$= -2$

$2g + 11 < 25$

$\frac{2}{3}r - 4 \geq 1$

$3(q + 1) < 3q + 7$

TICKET PURCHASES You can order discount movie tickets from a website for $7 each. You must also pay a shipping fee of $4. You want to spend no more than $40 on movie tickets. Find the possible numbers of movie tickets that you can order.

$-6 \le 2t - 5 \le -3$

$+5 \quad +5 \quad +5$

$\frac{-1}{2} \le \frac{2t}{2} \le \frac{2}{2}$

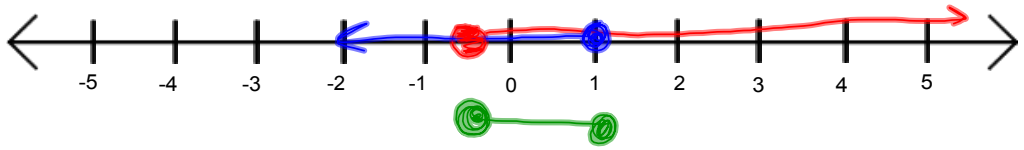
$-\frac{1}{2} \le t \le 1$

$9s - 6 < 12 \text{ or } 3s + 1 > 13$

$+6 \quad +6$

$9s < 18 \qquad 3s > 12$

$s < 2 \qquad s > 4$



$2|x-3|+1=5$

$3|2q+1|-5=1$

$$4|3p-2|+5=11$$

Homework:

Study for the test tomorrow!

Suggested practice:
Relevant problems on Ch. 3 test (p. 197)
Relevant problems on Ch. 6 test (p. 419)