Chapter 1 Review Name KEY CP___

Directions: *Read each question below and work it out in the space provided. Check your answers.*

DO NOT SUBTRACT FIRST

1) $14-6|3-5|+3=$

$14-6|-2|+3$

$14-6(2)+3$

$14-12+3=5$

2) $5-72\div 4(2-5)^2$

$5-72\div 4(-3)^2$

$5-72\div 4(9)$ → division first here

$5-18(9)$

$5-162=-157$

3) Evaluate the expression $ab^2+48\div a\cdot c$ if $a=2$, $b=-5$, and $c=-3$:

$2(-5)^2+48\div 2(-3)$

$2(25)+24(-3)$

$50-72=-22$

* 4) If $x=-2$ and $y=3$, then $-x-xy^2=?$

$-(-2)-(-2)3^2$

$2-(-2)9$

$2--18=20$

* Remember
$-x$ is
$-(-2)$ is
$x=-2$

5) What is the simplified form of $x^2+2xy-3x+4xy-6y+2y^2+3x-2xy+6y$?

$x^2+4xy+2y^2$

6) $3-(x-5)=2x-3(4-x)$

$3-x+5=2x-12+3x$

$8-x=5x-12$

$20=6x$

$\frac{20}{6}=x$

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

7) $6b-8=10-3b$

$+8\quad +8$

$6b=18-3b$

$9b=18$

$b=2$

8) $\frac{3}{8}=\frac{6}{j-2}$

$48=3(j-2)$

$48=3j-6$

$54=3j$

$18=j$

* 9) $9(q+2)-7=9q+1$

$9q+18-7=9q+1$

$-9q\qquad -9q$

$18-7=1$

$11=1$ X

no solution

ANSWERS:	1) 5	2) -157	3) -22	4) 20
5) $x^2+4xy+2y^2$	6) $^{10}/_3$ or $3^1/_3$	7) 2	8) 18	9) No Solution

10) $\frac{1}{9}-\frac{2}{3}b=\frac{1}{18}$

1. Find common denominator

$\frac{2}{18} - \frac{12}{18}b = \frac{1}{18}$

2. Eliminate all denominators

$2 - 12b = 1$

$-2 \quad -2$

$-12b = -1$

$b = \frac{1}{12}$

11) Solve the following formula for b_2:

$2A = \frac{h(b_1+b_2)}{2}$

$\frac{2A}{h} = \frac{h(b_1+b_2)}{h}$

$\frac{2A}{h} = b_1 + b_2$

$-b_1 \quad -b_1$

$\frac{2A}{h} - b_1 = b_2$

12) $|8w+2|+2=0$

1. ISOLATE $|\ |^s$

$|8w+2| + 2 = 0$

$-2 \quad -2$

$|8w+2| = -2$

2. Isolated $|\ |^s$ can never equal a negative number no solution

13) $2|2y-6|+4=8$

$2|2y-6| = 4$

$|2y-6| = 2$

$2y-6 = 2$ OR $2y-6 = -2$

$+6 \quad +6$

$2y = 8$ OR $2y = 4$

$y = 4$ OR $y = 2$

14) $4 > b+1$

$-b \quad -b$

$-b+4 > 1$

$-4 \quad -4$

$-b > -3$

$-1 \quad -1$

OR $4 > b+1$

$-4 \quad -4$

$0 > b-3$

$+3 \quad +3$

$3 > b$

SAME AS $b < 3$

15) $\frac{3-4f}{2} \le 1$

(2) $\frac{3-4f}{2} \le 1$ (2)

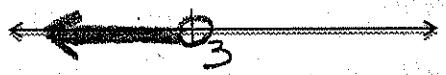
$3-4f \le 2$

$-3 \quad -3$

$-4f \le -1$

$\frac{-4f}{-4} \le \frac{-1}{-4}$

$f \ge \frac{1}{4}$



~~16) $12 < 7d - 5 \le 9$~~

~~17) $|5+k| \le 8$~~

SKIP

SKIP

10) $^1/_{12}$	11) $^{2A}/_h - b_1$	12) No Solution	13) 2, 4
14) $b < 3$	15) $f \ge \frac{1}{4}$	~~16) $1 < d \le 2$~~ SKIP	~~17) $-13 \le k \le 3$~~ SKIP

18) What is the value of $7^2 - 2[3 + 2(5-1)]$?

A. -9
B. -8
C. 9
D. 27
E. 940

$49 - 2[3+2(4)]$
$49 - 2[3+8]$
$49 - 2[11]$
$49 - 22 = 27$

19) What is the value of $5 \cdot 3^2 - 3(4 + 2 \cdot 3)$?

A. 195
B. 171
C. 150
D. 15
E. -9

$5 \cdot 9 - 3(4+6)$
$45 - 3(10)$
$45 - 30 = 15$

20) If $x = -3$ and $y = 5$, then $x^2y = ?$

A. -50
B. -45
C. 45
D. 50
E. 55

$(-3)^2(5)$
$9 \cdot 5$
45

21) If $x = -2$ and $y = -3$, then $x^2 - 4xy - x = ?$

A. -24
B. -20
C. -18
D. -16
E. -14

$(-2)^2 - 4(-2)(-3) - (-2)$
$4 + 8(-3) - (-2)$
$4 - 24 - (-2)$
$4 - 24 + 2 = -18$

22) What is the simplified form of $x - \{5 - 3[2x - 3(x+2)]\}$?

A. $-9x - 12$
B. $-8x - 3$
C. $-2x - 23$
D. $-2x + 13$
E. $16x - 23$

$x - \{5 - 3[2x - 3x - 6]\}$
$x - \{5 - 3[-x - 6]\}$
$x - \{5 + 3x + 18\}$
$x - 5 - 3x - 18 = -2x - 23$

23) Which of the following is (are) like terms?

I. $34x$ and $-18x$
II. $2x$ and $2y$
III. x^3 and $3x$

A. I only
B. II only
C. I and III only
D. II and III only
E. I, II, and III

* make sure that you match letters AND exponents exactly

24) $3xy + 3x^2y - 2xy + y = ?$

A. $6xy - y$
B. $x + xy + y$
C. $x^2y^2 + xy$
D. $3xy + x$
E. $3x^2y + xy + y$

$3xy + 3x^2y - 2xy + y$
$3x^2y + xy + y$

25) What is the solution set of $2x - 5 = 7 - 4x$?

A. {1}
B. {2}
C. {½}
D. {-2}
E. $\{-\frac{1}{3}\}$

$2x - 5 = 7 - 4x$
$+4x \quad +4x$
$6x - 5 = 7$
$+5 \quad +5$
$\frac{6x}{6} = \frac{12}{6} \rightarrow x = 2$
$\{2\}$ set notation

26) If $p - 11 - 2p = 13 - 5p$, then $p = ?$

A. -4
B. -1
C. 1
D. 2
E. 6

$p - 11 - 2p = 13 - 5p$
$-1p - 11 = 13 - 5p$
$+1p \quad +1p$
$-11 = 13 - 4p$
$-13 \quad -13$
$\frac{-24}{-4} = \frac{-4p}{-4}$
$6 = p$

27) What is the solution set of the equation $0.2(100 - x) + 0.05x = 0.1(100)$?

A. $\{-33\frac{1}{3}\}$
B. {10}
C. {40}
D. $\{66\frac{2}{3}\}$
E. $\{95\frac{95}{399}\}$

$0.2(100 - x) + 0.05x = 0.1(100)$
$20 - .2x + .05x = 10$
$20 - .15x = 10$
$-20 \quad -20$
$\frac{-.15x}{-.15} = \frac{-10}{-.15}$
$x = 66\frac{2}{3}$

28) Which is the solution set of the equation $4x - 2[3x - (x+4)] = 5 - 2(x+1)$?

A. $\{-\frac{5}{2}\}$
B. $\{\frac{5}{3}\}$
C. $\{-\frac{11}{7}\}$
D. {-2}
E. $\varnothing$

$4x - 2[3x - x - 4] = 5 - 2x - 2$
$4x - 6x + 2x + 8 = 3 - 2x$
$0x + 8 = 3 - 2x$
$+2x \quad +2x$
$2x + 8 = 3$
$-8 \quad -8$
$\frac{2x}{2} = \frac{-5}{2}$
$x = -\frac{5}{2}$
$\{-\frac{5}{2}\}$ set notation

29) If $\frac{4}{5} = \frac{x}{4}$, then $x = ?$

A. 5
B. $\frac{16}{5}$
C. $\frac{5}{4}$
D. $\frac{4}{5}$
E. $\frac{5}{16}$

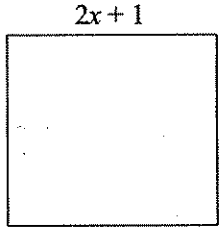
$\frac{4}{5} = \frac{x}{4}$
$\frac{16}{5} = \frac{5x}{5}$
$\frac{16}{5} = x$

30) If $\frac{a}{2}-\frac{a}{4}=1$, then $a=?$

A. ½
B. $^2/_3$
C. 1
D. 2
E. 4

31) If the figure below is a square, what is the perimeter of the figure?

A. 28
B. 16
C. 9
D. 3
E. 2



B/c we know it's a square, we know all sides are equal so

$2x+1 = x+4$
$-1 \quad -1$
$2x = x+3$
$-x \quad -x$
$x = 3$

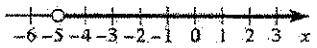
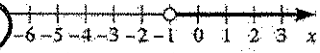
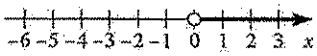
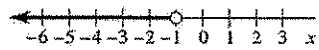
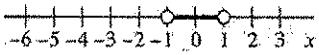
one side is $(2(3)+1) = 7$
so all sides added together (perimeter) = 28

32) Solve: $4(x-3) > 9(x+2)$

A. $\{x \mid x < -1\}$
B. $\{x \mid x > -1\}$
C. $\{x \mid x > -6\}$
D. $\{x \mid x < -6\}$
E. $\{x \mid x > -\frac{6}{5}\}$

$4x - 12 > 9x + 18$
$+12 \quad +12$
$4x > 9x + 30$
$-9x \quad -9x$
$\frac{-5x}{-5} > \frac{30}{-5}$
→ switch sign! → $x < -6$

36) Which of the following graphs represents the solution of $3x-1 > -2(x+3)$?

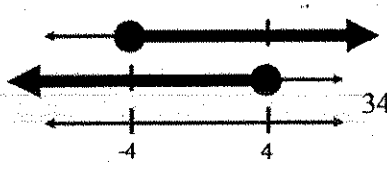
A. 
B. 
C. 
D. 
E. 

$3x-1 > -2(x+3)$
$3x-1 > -2x-6$
$+1 \quad +1$
$3x > -2x-5$
$+2x \quad +2x$
$\frac{5x}{5} > \frac{-5}{5}$
$x > -1$

Answer Choices for #34 & #35:

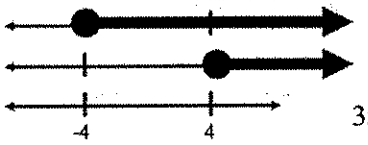
A. $\{x \mid x \text{ is a real number}\}$ B. $\{\}$ C. $\{x \mid x \geq 4\}$
D. $\{x \mid x \leq 4\}$ E. $\{x \mid -4 \leq x \leq 4\}$
F. $\{x \mid x \geq -4\}$ G. $\{x \mid x \leq -4\}$

34) The graph below is an **AND** compound inequality. Identify the final solution.



34) Answer: _____

35) The graph below is an **OR** compound inequality. Identify the final solution.



35) Answer: _____

18) D	19) D	20) C	21) C	22) C	23) A	24) E	25) B
26) E	27) D	28) A	29) B	30) E	31) A	32) D	~~33) A~~
~~34) E~~	~~35) E~~	36) B				Also review all packets worked on this chapter.	