ORDER OF OPERATIONS, ALGEBRA AND "MEANING" PRACTICE QUIZ

/69

Victim: _____

1. Separate each of the following expressions into ***terms***. Then ***evaluate***. (Show all steps!) /20

(a) $-4^2+(-4)^2-5(5-7(6))+5(-2)^5$

$=-16+16-5(5-42)+5(-32)$

$=0-5(-37)+(-160)$

$=0-(-185)-160$

$=0+185-160$

$=25$

(b) $1-9^2+5(-3)(-2)^5+(-9)^2-5\left[1-2\left(6^2\right)\right]$

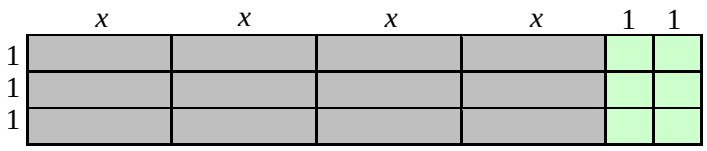
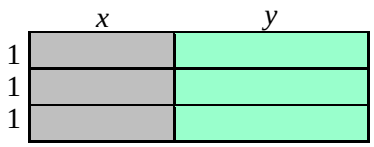
(c) $\dfrac{-2\left[14-3(-7)^2\right]-(-16)}{-6^2+3(-7)(-8)-4(3-7)}$

(d) $\dfrac{-(-4)-2\left[-11-3(-7)^3\right]}{-7^2-4(-3-7)+3(7)(-8)}$

2. ***Interpret*** each of the following in terms of ***gains*** and ***losses***. Then ***simplify***. (Show all steps!) /24

Expression	***Interpretation in Terms of Gains and Losses***	***Simplified Form of Expression***	***Answer***
(a) $-x-(-3x)$	A ***loss of 1 "x"*** followed by a ***gain of 3 "x's"***	$-x+3x$	$2x$
(b) $-6a+(+12a)$			
(c) $-1y+(-46y)$			
(d) $+18st^2-(+41st^2)$			
(e) $48a^2b^3-(-31a^2b^3)$			
(f) $-38xyz-30xyz$			
(g) $-38xyz-30xyz^2$			

3. Interpret each expression in terms of groups. Then represent the expression with a diagram and evaluate. /8

Factored Expression	***Interpretation in Terms of Groups***	***Diagram***	***Expanded Expression***
(a) $3(4x+2)$	***Three groups*** of $4x+2$		$12x+6$
(b) $3(x+y)$	***Three groups*** of $x+y$		$3x+3y$
(c) $-3(x+y)$			
(d) $-2(2x-3y)$			

4. Simplify each expression fully. /17

(a) $(-3ab-5c)+(ab-c)$

(b) $(-3ab-5c)-(ab-c)$

(c) $-(3ab-5c)+6(ab-c)$

(d) $-(3ab-5c)-6(ab-c)$