## Name

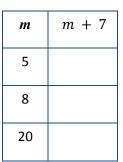
# **Expressions and Equations Review Packet**

### 1) Vocabulary

Don't forget to study your terms. The Quizlet is a great resource.

#### 2) Evaluating Expressions

Input the values and simplify using Order of Operations (PEMDAS/GEMS)



d	$\frac{d}{2}$
6	
10	
42	

п	4 <b>n</b> + 3
4	
6	
12	

### 3) Verbal Phrases

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#### Writing Expressions:

- a) 5 more than a number \_\_\_\_\_\_ b) The sum of 8 and a number \_\_\_\_\_\_ c) Half of a number \_\_\_\_\_ d) 12 less than a number \_\_\_\_\_
  - e) Jane is twice as old as Ed. How old is Jane if Ed is d years old?
  - f) If you read 9 pages a day for *d* days. How many pages did you read?

#### Writing Equations:

- a) The sum of 25 and a number is 34 \_\_\_\_\_
- b) Jan has *d* dollar in her bank account. She spends \$12 and has \$54 left \_\_\_\_\_\_
- c) Peter makes \$12 an hour (h) stacking wood. He now has \$288

# Writing Inequalities:



- a) x is less than 10 \_\_\_\_\_ b) y is greater than 52 \_\_\_\_\_
- c) x is no more than 89 \_\_\_\_\_ d) x is at most 150 lbs.
- e) You must be at least 54 inches to ride on the roller coaster
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-2m-1
- 7h — 2h 💡

Complete the table by expanding or combining each expression.

Expanded Terms	<b>Combined Terms</b>
b+b+b+b+b	
	4 <i>m</i>
a + a + a	
	4p + n
x + x + y + x + y	

#### 5) Distribute and Combine Like Terms

Santa Hat- Multiply EVERY term in the parentheses		
a) $5(x+3)$	b) 9(7 - 3 <i>j</i> )	c) $4(2x + 3y - 6)$

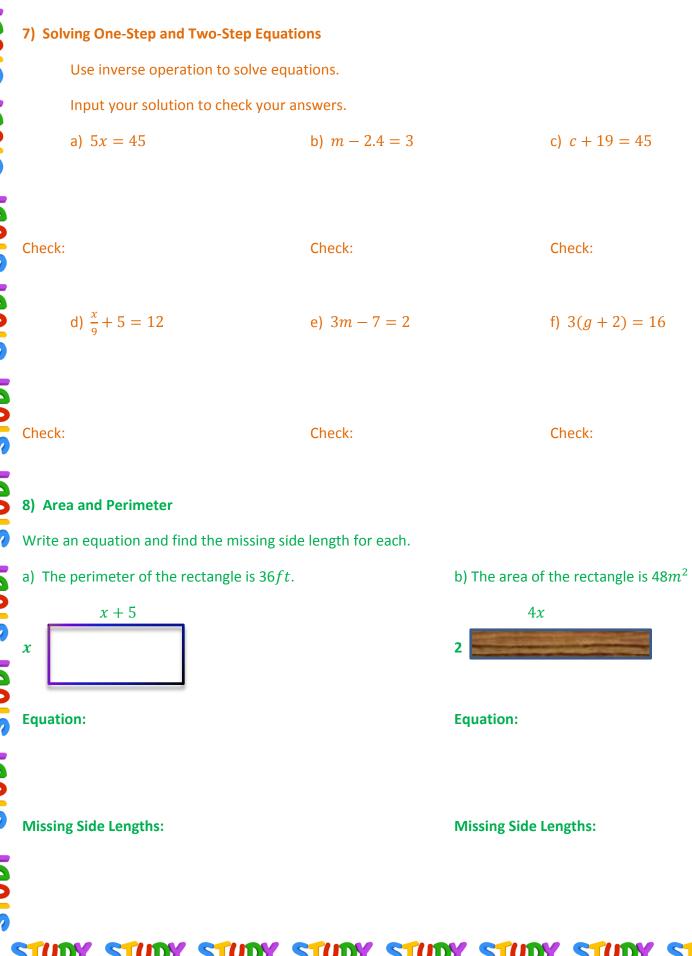
d) 4(2x+3) + 3x e) 9(4-3b) - 12 f) 4(4a+3) - 6a+2

#### 6) Factor

Pull out the GCF (take out the largest group of friends). Distribute to check.

a) 5x + 10 b) 12m - 24 c) 2 - 6a

d) 4m + 12n - 8 e) 18x + 27y - 63 f) 42g - 56



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### 9) Tables and Rules

Find the Rule in the input/output table and write the equation

Determine the 'independent variable' and the 'dependent variable'

Independent Variable- Input value. Usually x

Dependent Variable- Output Value. Usually y

x	У
2	7
3	8
4	
	14
Equatio	n:

т	n
9	7
11	9
13	
	24

Equation: Independent Variable: Dependent Variable: Equation: Independent Variable: Dependent Variable:

a	b
3	9
5	15
7	
	36

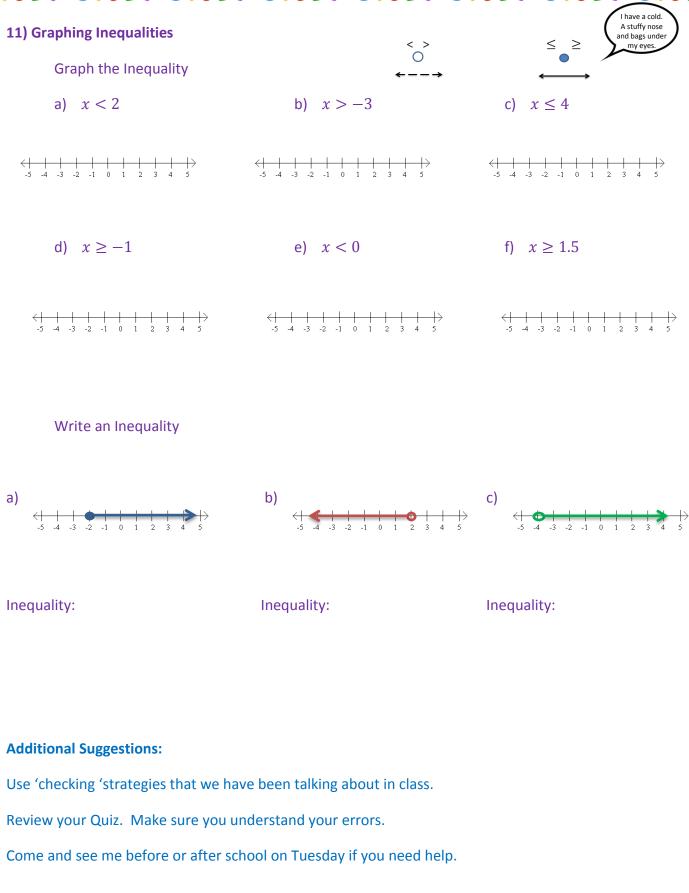
g	h
12	2
18	3
24	
	8

Equation: Independent Variable: Dependent Variable:

Equat	ion:
Indep	endent Variable:
Deper	dent Variable:

## 10) Is the value a solution to the inequality?

a) <i>m</i> = 5	b) $g=-7$	c) $y = 0$	d) $h = 2.4$
m < 5	$g \leq -7$	$5 \leq y$	<i>h</i> < 3
yes or no?	yes or no?	yes or no?	yes or no?
e) <i>m</i> = 3	f) $g = 3$	g) $y = 0$	h) $h = 1.9$
$m + 2 \leq 5$	$2g \ge 7$	$4 \ge 5y$	h + 0.9 < 3
yes or no?	yes or no?	yes or no?	yes or no?



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