**Take out page three from the packet from last class. Pull off page 3 and write your name on it. I will come around to collect it.**

Module 8
TEST Review

**1** What is the first step in evaluating the expression 5 $(6 - 4 + 2)^2$?

PEMDAS →

Ⓐ 6 − 4   Ⓒ 5 x 6
Ⓑ        Ⓓ

**2** Silvio made 35 cupcakes. He also made *m* muffins. Which expression represents how many more muffins Silvio made than cupcakes?   made MORE muffins than Cupcakes

Ⓐ        Ⓒ
Ⓑ *m* ÷ 35   ● *m* − 35

**3** Select **all** the expressions that are equivalent to 6 x 6 x 6 x 6 x 6 x 6 x 6

(6·6·6)(6·6·6·6)
● $6^3$ x $6^4$
Ⓑ ✗
● $6^7$
Ⓓ ✗ = $6^8$
Ⓔ $7^3$ x $7^2$ ✗

Base = 6
exponent = 7
$6^7$
And any exponents that add up to 7 on a base of 6.

6 × 6 × 6 × 6 × 6 × 6 × 6
8 sixes

**4** Which value for *x* makes the expressions equivalent?

[ 8x + 4 ] and [ 4(x + 6) ]

**SHOW WORK**
✗ 7
✗ 6
Ⓒ 5   Ⓓ 4

Ⓐ $8(7) + 4 \overset{?}{=} 4(7 + 6)$
56 + 4 = 4(13)
60 ≠ 52

Ⓑ $8(6) + 4 \overset{?}{=} 4(6 + 6)$
48 + 4 = 4(12)
52 ≠ 48

Ⓒ $8(5) + 4 \overset{?}{=} 4(5 + 6)$
40 + 4 = 4(11)
44 = 44 ✓

**5** Simplify the expression: **(SHOW WORK)**

MULTIPLY
25 - 3(*a* − 5) + 7*a*.

25 − 3(a) − 3(−5) + 7a
25 − 3a + 15 + 7a
40 + 4a

• Can't simplify a − 5 because they're not like terms
• Use the DISTRIBUTIVE PROPERTY to multiply the − 3
• Combine like terms

**6** Evaluate the expression when *x* = 3
**(SHOW WORK)**

$10^2 ÷ 4(2 + x) − 9 = $ _____

$10^2 ÷ 4(2 + 3) − 9$
$10^2 ÷ 4(5) − 9$
$100 ÷ 4(5) − 9$
$25(5) − 9$
$125 − 9 = $ 116

$\overset{2}{2}5$
× 5
125

1

**7** What are the different parts of the expression $5x + 9y - 14$?

Write each part of the expression in the correct place in the table.

| Constant | Variables | Coefficients |
|----------|-----------|--------------|
| $-14$ | $x$ & $y$ | $5$ & $9$ |

**8** Caroline earned 70 points for writing an essay on a test. She also earned 3 points for every question, $q$, she answered correctly. What expression can be used to find how many points Caroline earned on the test?

$70 + 3q$

**9** Are the expressions equivalent to each other? (**Yes or No, and SHOW WORK**)

$6( x + 2)$ and $6x + 8$

• Use distributive property to rewrite $6(x+2)$

$6(x)+6(2)$

$6x + 12 \neq 6x + 8$

No, the expressions are not equivalent.

**10** **Part A**

A taxi service charges $6.50 to pick someone up, and then $0.80 per mile for a trip.

Write an expression that can be used to find the cost of a taxi ride for any number of miles, *m.*

$6.5 + 0.8m$

**Part B**

What is the cost of a taxi ride that is 5 miles long? **(SHOW WORK)**

$6.5 + 0.8(5)$

$6.5 + 4 = \$10.50$

$$\begin{array}{r} 0.8 \\ \times\ 5 \\ \hline 4.0 \end{array}$$