Good Morning!

Today you will need:
- blue vocab packet
- graph spiral
- pencil
- **NO** calculator

In your graph spiral, answer the following question:

Damon wants to buy his 3 buddies lunch. Everyone wants an order of fries ($1.75 each), a burger ($3.50 each), and a milkshake ($2.25 each).

Using the distributive property, write two equivalent expressions (one in factored form, one in expanded form) that would find the total cost for all 4 people.

---

expression

	ex:
A number sentence with integers and operations (+, −, x, ÷), and sometimes variables.	$x - 8$ **8** is the integer, **−** is the operation, **x** is the variable

equivalent expressions

	ex:
Expressions that represent the same quantity.	some equivalent expressions 2 + 5 and 3 + 4 2 (x + 6) and 2x + 12 20 + 4x and 4x + 20

Writing and Comparing Expressions

You are planning to buy a snowboard. You need to figure out the total cost with sales tax, so you know how much money you need to save up.

1. The sales tax is 9%. Write an algebraic expression that would find the amount of the tax, for the cost of any snowboard *c*.

2. How would you determine the total cost of the snowboard? Explain fully.

3. Write an algebraic expression to represent what you described in problem 2, for the total cost of the snowboard with tax.

4. Using what you know about *combining like terms*, what would be an equivalent expression to the one you wrote in problem 3?

5. How does this expression find the total cost in a *different* way? Explain fully.

Class Work Answers:

1. The sales tax is 9%. Write an algebraic expression that would find the amount of the tax, for the cost of any snowboard *c*.

   0.09c

2. How would you determine the total cost of the snowboard? Explain fully.

   Multiply 9% tax by the cost of the snowboard, and then add it to the cost of the snowboard.

3. Write an algebraic expression to represent what you described in problem 2, for the total cost of the snowboard with tax.

   0.09c + c

4. Using what you know about *combining like terms*, what would be an equivalent expression to the one you wrote in problem 3?

   1.09c

5. How does this expression find the total cost in a *different* way? Explain fully.

   This expression multiplies the cost of the snowboard by 1.09 or 109%.

Julie takes 3 friends to the nail salon. Each person gets a pedicure, and 2 flowers painted on their nails.

6. Write an algebraic expression that would find the total cost for all 4 people, if *p* represents the cost of a pedicure and *f* represents the cost of a painted flower.

7. How does this expression find the total cost? Explain fully.

8. Using what you know about the *distributive property*, what would be an equivalent expression to the one you wrote in problem 6?

9. How does this expression find the total cost in a *different way*? Explain fully.

Class Work Answers:

6. Write an algebraic expression that would find the total cost for all 4 people, if p represents the cost of a pedicure and f represents the cost of a painted flower.

$4p + 8f$ OR $4(p + 2f)$

7. How does this expression find the total cost? Explain fully.

This expression adds the cost of 4 pedicures and 8 painted flowers.

8. Using what you know about the *distributive property*, what would be an equivalent expression to the one you wrote in problem 6?

$4(p + 2f)$ OR $4p + 8f$

9. How does this expression find the total cost in a *different way*? Explain fully.

This expression adds the cost of 1 pedicure and 2 painted flowers, and then multiplies it by 4 people.
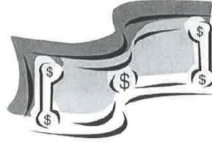
Homework:

Write and Compare Expressions Practice worksheet

(NO calculator)

---

expression

A number sentence with integers and operations (+, −, x, ÷), and sometimes variables.

ex:

$$x - 8$$

8 is the integer, **−** is the operation, **x** is the variable

equivalent expressions

Expressions that represent the same quantity.

ex:

some equivalent expressions

$2 + 5$ and $3 + 4$

$2(x + 6)$ and $2x + 12$

$20 + 4x$ and $4x + 20$