SPEED DRILL WARM-UP ACTIVITY

Name the operation representative of each of the following:

percent	left	reduction
total	more	half
less	twice	off
lower	each	double

Write the equivalents:

20% as a decimal is _____

0.06 as a percent is _____

Total cost of 14 items at $2 each is _____

$55,000 reduced by $3500 is _____

$5 item marked 30% off saves _____

"Poetic Math Challenge"

Score Sheet

Class: _____   Date: _____

Names: _____ # __
(Please print.   _____ # __
                 _____ # __
                 _____ # __

Score: Possible Points	Group Points Earned	Individual Points Earned*
1. 2	__	__
2. 3	__	__
3. 5	__	__
4. 2	__	__
5. 3	__	__
6. 3	__	__
7. 3	__	__
8. 4	__	__
9. 2	__	__
10. 3	__	__
Total: **30**	__	__

*This column is to be used in Lesson #2.

Sunshine State Standards: The student…

MA.D.1.4.1: describes, analyzes, & generalizes relationships, patterns, functions using words, symbols, variables, tables, and graphs.

LA.B.2.4.3: writes for a variety of occasions, audiences, purposes, tones, style, detail, & organization.

Solutions Wor___ ___

#__

#__

#__

#__

#__

Poetic Math Challenge Cards Template

1

2

3

4

5

6

Poetic Math Challenge Cards Template

7	8
9	10

Poetic Math Challenge Cards Template

F-Cat-Cat-Cat
Stayin'Alive,
Stayin'Alive
If twice a
number is
equal to ten,
why is that
number equal
to five?

Today I went to
store
to buy five $1.
treats.
Boy, was I
surprised to
find a sale on
sweets!
20% off was

Where, oh,
where has my
money gone?
I spent
three-fourths
on food
alone. If I
started with
a $20 bill,

There is a
play on March
eight.
Wizard of OZ,
I do believe
they say. If
37 students
take $5 each

I baked 15 pies fo
Christmas party.
were
taken home to eat
Marty.
Hardy took half as
and said that was
while Carly instea
taking
none took Marty's
less one. How man
did I have left wh

A sniper shot
peppers out of
Peter's hand.
Every time he
nicked a
pepper, Peter
picked 10
peppers. The
sniper shot 20
peppers and
Peter picked 10

Poetic Math Challenge Cards Template

I want to buy a car that will take me very far. $3000 here, $1000 there, another $6000 would put wind in my hair.
If I have

There are 12 inches on my ruler, but 60 inches is the measurement of my cooler. How many rulers do I need to

I have $300 to spend and I will share it with a friend. $100 is what she tends to spend. So how much will I have in the end for me to

When Carli went to the store, she bought grapes and so much more. Two pounds for $4.60, and hot dogs a plenty; 12 for $3.25.

On Friday night I have
but I
need some help before i
late.
We are supposed to dine for
a fifty. Two dollars e
desert
at ten will be nifty.
to
drink will be five doll
and,
of course, I must pay f
dollars
when we walk in the doo
tip I'll have to pay an

I was so sad to find out today, that my boss has decided to decrease my pay. If $30,000 last year I did make, a reduction of $4500 will

Poetic Math Challenge Problems

These are the problems that are on the playing cards. You may duplicate them for later practice or make a transparency to be used during the competition.

1. Today I went to the store to buy five $1.00 treats. Boy, was I surprised to find a sale on sweets! 20% off was the deal, so how much did I pay for such a steal?

2. F-Cat-Cat-Cat, Stayin' Alive, Stayin' Alive! If twice a number is equal to ten, why is that number equal to five?

3. There is a play on March eight. Wizard of OZ, I do believe they say. If 37 students take $5 each for lunch, how much will it cost for the whole bunch?

4. Where, oh, where has my money gone? I spent three-fourths on food alone. If I started with a $20 bill, how much was left after my fill?

5. A sniper shot peppers out of Peter's hand. Every time he nicked a pepper, Peter picked 10 peppers. The sniper shot 20 peppers and Peter picked 10 more. How many peppers did Peter pick and how many did the sniper shoot?

6. I baked 15 pies for my Christmas party. Six were taken home to eat by Marty. Hardy took half as many and said that was plenty, while Carly instead of taking none took Marty's number less one. How many pies did I have left when all was said and done?

7. There are 12 inches on my ruler, but 60 inches is the measurement of my cooler. How many rulers do I need to measure my cooler?

8. I want to buy a car that will take me very far. $3000 here, $1000 there, another $6000 would put wind in my hair. If I have $2500 less than that to spend, what is the price of the car I'll be in?

9. When Carli went to the store, she bought grapes and so much more. Two pounds for $4.60, and hot dogs a plenty; 12 for $3.25, with buns half the price – of the dogs, that is. How much did she spend, with 6% tax on the end?

10. I have $300 to spend and I will share it with a friend. $100 is what she tends to spend. So how much will I have in the end for me to lend, or spend? Hey, maybe I will start a trend!

11. I was so sad to find out today, that my boss has decided to decrease my pay. If $30,000 last year I did make, a reduction of $4500 will lower my take.
Express the reduction as a percent to understand exactly what is meant!

12. On Friday night I have a date, but I need some help before it is too late. We are supposed to dine at nine for a fifty. Two dollars each for desert at ten will be nifty. Something to drink will be five dollars more, and, of course, I must pay fifteen dollars when we walk in the door. A 20% tip I'll have to pay and a hundred dollars is all you gave me today. It looks like I'll have enough, thanks to you, but how much will I have left after all this is through?

Poetic Math Challenge Problems

Answer Key

1. Today I went to the store to buy five $1.00 treats. Boy, was I surprised to find a sale on sweets! 20% off was the deal, so how much did I pay for such a steal?

Cost for 5 treats: 5 x 1.00 = $5.00
Savings: $5.00 x .20 = $1.00
Cost: $5.00 –1.00 = **$4.00**

2. F-Cat-Cat-Cat, Stayin' Alive, Stayin' Alive! If twice a number is equal to ten, why is that number equal to five?

x = unknown number
Twice means to multiply by 2.
Equation: 2x = 10
   x = 5 *Divide both sides by 2*

3. There is a play on March eight. Wizard of OZ, I do believe they say. If 37 students take $5 each for lunch, how much will it cost for the whole bunch?

Multiply the cost of each by the number of students: 37 x 5 = **$185**

4. Where, oh, where has my money gone? I spent three-fourths on food alone. If I started with a $20 bill, how much was left after my fill?

Calculate ¾ of the $20 bill: ¾ x 20 = $15
Subtract 15 from 20 to determine the amount left: $20 – 15 = **$5**

5. A sniper shot peppers out of Peter's hand. Every time he nicked a pepper, Peter picked 10 peppers. The sniper shot 20 peppers and Peter picked 10 more. How many peppers did Peter pick and how many did the sniper shoot?

Given: **The sniper shot 20 peppers**.
For each shot (nick) Peter picked 10 peppers: 20 x 10 = 200 peppers
After the sniper shot 20, Peter picked 10 more: 200 + 10 = **210 peppers**

6. I baked 15 pies for my Christmas party. Six were taken home to eat by Marty.   Hardy took half as many and said that was plenty, while Carly instead of taking none took Marty's number less one. How many pies did I have left when all was said and done?

Total pies baked =   15
Marty took 6 =   -6
Hardy took ½ of Marty's =   -3
Carly took Marty's # less 1 = <u>-5</u>
   1 pie left

7. There are 12 inches on my ruler, but 60 inches is the measurement of my cooler. How many rulers do I need to measure my cooler?

12 inches = 1 ruler

Divide 60 inches by 12 inches = **<u>5 rulers</u>**

8. I want to buy a car that will take me very far. $3000 here, $1000 there, another $6000 would put wind in my hair. If I have $2500 less than that to spend, what is the price of the car I'll be in?

Find the total of the money declared: 3000 + 1000 + 6000 = $10,000
Subtract the $2500: $10,000 – 2500 = **$7500 Price of car**

9. When Carli went to the store, she bought grapes and so much more. Two pounds for $4.60, and hot dogs a plenty; 12 for $3.25, with buns half the price – of the dogs, that is. How much did she spend, with 6% tax on the end?

Find the cost of the items: $4.60 for the grapes
                                      3.25 for the hot dogs
                                      1.63 for the buns (1/2 of $3.25)
                                     $9.48

Calculate the tax: $9.48 x .06 = $0.57
Add tax to cost: $9.48 + 0.57 = **$10.05 Total cost including tax**

10. I have $300 to spend and I will share it with a friend. $100 is what she tends to spend. So how much will I have in the end for me to lend, or spend? Hey, maybe I will start a trend!

Subtract the amount to lend from the total to get what is left: $300 – 100 = **$200 Left**

11. I was so sad to find out today, that my boss has decided to decrease my pay. If $30,000 last year I did make, a reduction of $4500 will lower my take. Express the reduction as a percent to understand exactly what is meant!

Divide the amount of reduction by the original pay: $4500 ÷ 30,000 = .15
Change the decimal to percent: .15 = **15% Reduction**

12. On Friday night I have a date, but I need some help before it is too late. We are supposed to dine at nine for a fifty. Two dollars each for desert at ten will be nifty. Something to drink will be five dollars more, and, of course, I must pay fifteen dollars when we walk in the door. A 20% tip I'll have to pay and a hundred dollars is all you gave me today. It looks like I'll have enough, thanks to you, but how much will I have left after all this is through?

Cost of meal:		$50.00
Cost of desert:	2 x $2 =	4.00
Cost of drink:		5.00 (This represents drink for 2.)
Total for meal:		$59.00
20% Tip:	.20 x $59 =	11.80
Total for meal plus tip:		$70.80
Plus Cover charge (not tipped):		15.00
Total Cost:		$85.80

Amount left: $100 – 85.80 = $14.20

(It might be interesting to mention to students this calculation did not include any tax.)

Poetic Math Challenge   Sharla L. Shults   www.beaconlc.org

Poetic Math Challenge   Name _____
Criteria Checklist for Assessment

Language Arts
The student:

☐ demonstrates working knowledge of literary terms by creating six word problems using at least two literary devices for each problem**.**

☐ writes all six assigned problems.

☐ completes the writing of all six word problems within the allotted time period.

☐ demonstrates the ability to write logically in the development of each poetic word problem.

Mathematics
The student:

☐ demonstrates logical reasoning in problem solving.

☐ demonstrates accuracy throughout problem-solving process (i.e. no arithmetic errors).

☐ demonstrates proper algebraic logic.

☐ solves all problems correctly.

☐ includes proper units with answer.

☐ provides a clear and precise explanation.

Cooperative Learning

☐ Each member works well with other members of their group.

☐ Each member offers encouragement to other members of their group.

☐ Each member performs assigned role consistently throughout activity.

☐ Each member stays on task throughout the entire activity.

☐ Each member completes assigned work within the allotted time period.

☐ **NO WHINING!**

☐ **Reads and follows all directions!**

Information Sheet for Assessment of *Poetic* Math Challenge

The student:
- Solves three teacher-created problems in the Think, solve, and Explain format to demonstrate understanding of concepts and problem solving.
- Writes 2 problems in poetic form complete with answer and solution key in Think, Solve, and Explain format.

Criteria for formative assessment:
The student:
- Demonstrates logical reasoning in problem solving.
- Demonstrates accuracy throughout problem-solving process (i.e. no arithmetic errors).
- Demonstrates proper algebraic logic.
- Solves each problem correctly.
- Includes proper units with answer.
- Provides a clear and precise explanation for each problem.
- Demonstrates the ability to write logically in the development of each poetic word problem.

NOTE: You are given this information prior to the assessment. You are allowed to rough draft your 2 student-written problems and use this for reference on the day of the assessment.

I have read and fully understand the information and directions stated above.

Name:
_____**D**
ate: _____

Parent **S**ignature:
_____

Sunshine State Standards:

MA.D.1.4.1: The student describes, analyzes, and generalizes relationships, patterns, and functions using words, symbols, variables, tables, and graphs. (Tables & graphs are not addressed in this lesson.)

LA.B.2.4.3: The student writes for a variety of occasions, audiences, purposes, tones, style, detail and organization.

Poetic Math Challenge Assessment

Name _____

   Date   _____

Part 1: Solve the following problems using the Think, solve, and Explain format. You must write in the space provided. Be sure to refer back to the criteria to be used for grading. Do your best and good luck!

1. Once there was a boy named Kent who one day discovered he had spent: $150 each on 2 new suits, $80 on a pair of boots. When he started to pay, the cashier did say, "By the way, there's a 20% off sale today."   This was quite a thrill, so how much did he actually pay for the bill (excluding tax)?

Think: *What are you trying to find?*

Solve: *Numerical computation*

Explain: *Describe procedures in words*

Four were taken home by Marty. Hardy took twice as many and said that was plenty. Carly, after everyone was through, took

Think: *What are you trying to find?*

Solve: *Write an equation and find the solution.*

Explain: *Describe your reasoning and check your solution by inspection.*

3.   Where, oh, where has my money gone?
     I spent four-fifths on food alone. If I
     started with a $20 bill, how much was
     <u>left</u> after my fill?

Think: *What are you trying to find?*

Solve: *Write an equation and find the solution.*

Explain: *Describe your reasoning and check your solution by inspection.*

BONUS*:

*On Friday night I have a date, but I need
some help before it is too late. We are
supposed to dine a nine for a fifty. Two
dollars each for desert will be nifty.
Something to drink will be five dollars
more, and, of course, I must pay fifteen
dollars when we walk in the door. A 20% tip
I'll have to pay and a hundred dollars is
all you gave me today. It looks like I'll
have enough, thanks to you, but how much
will I have left after all this is through?

Think: *What are you trying to find?*

Solve: *Write an equation and find the solution.*

Explain: *Describe your reasoning and check your solution by inspection.*

Part 11: The second part is up to you.
Write 2 original poetic word problems,
solve, and give the solution in Think,
Solve, and Explain format. Be creative.
Good luck and do your best! Remember,
you are allowed to use your rough drafts!

1. _____

_____

_____

_____

_____

_____

_____

_____

_____

Think: *What are you trying to find?*

Solve: *Write an equation and find the solution.*

Explain: *Describe your reasoning and check your solution by inspection.*

2. _____

_____

_____

_____

_____

_____

_____

_____

_____

Think: *What are you trying to find?*

Solve: *Write an equation and find the solution.*

Poe

Explain: *Describe your reasoning and check your solution by inspection.*

Poetic Math Challenge Assessment
<u>ANSWER KEY</u>-Computations

1. Cost of 2 suits: $150 x 2 = $300
    Cost of boots:
<u>80</u>
    Cost before discount: $380
    Less 20% off: .20 x 380
    <u>-   76</u>
       Total cost excluding tax: $304

2. Total pies baked:
    15
       Less Marty's   -4
       Less Hardy's (2 times Marty's)   -8
       Less Carly's (Marty's less 2)   <u>-2</u>
                                   14
Number of pies left: 15 – 14 = **<u>1 pie</u>**

3. Amount spent: 4/5 of $20 = .8 x 20 = $16
    Amount left: $20 – 16 = **<u>$4.00</u>**

<u>BONUS:</u> **See #12 of Poetic Math Challenge problems.**

4. and 5.   Answers will vary. These are student-created problems.

NOTE: Check students' reasoning ability!