Name:_____

College:_____

4th Grade Math
Hybrid Learning Packet

Week of: 12/7-12/11

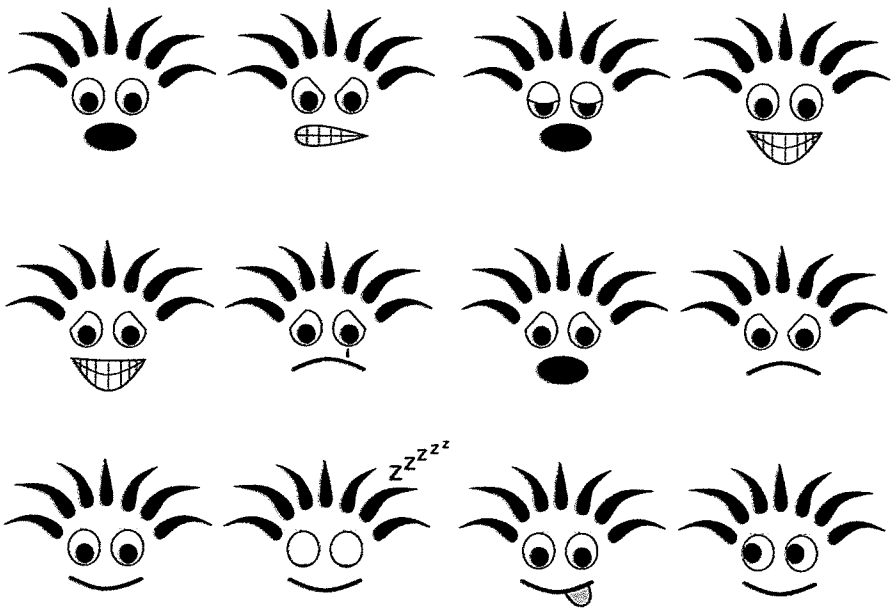
Spelman College®

WILLIAM SMITH

Monday

Date: December 7

How are you feeling today?



Learning Target: **Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.**
Standards:4.NBT.5

Do Now: 4.NBT.1

Ms. Larsen is buying 2 delivery vans for her business. The price of the first van is shown below.

$16,257

The digit 2 in the price of the second van is 10 times the value of the digit 2 in the price of the first van. Which amount could be the price of the second van?

10x

A $12,987

B $15,927

C $17,257

D $21,579

1st van

16,257

2nd van

16257

×10

Concept Development

Calculate the total amount of milk in three cartons if each carton contains 236 mL of milk.

```
  1 1
  236
+ 236
  236
  708 ✓
```

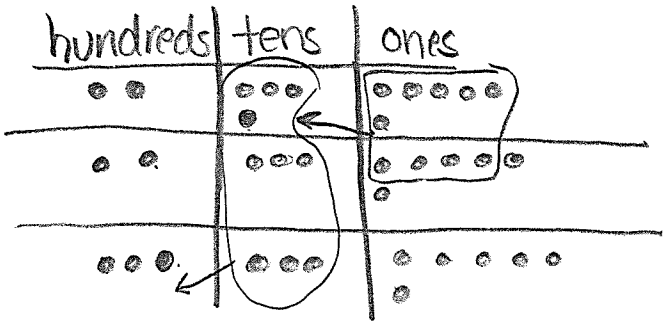
Bundles have 10

What do we know?
- each carton has 236 mL

236	236	236

What do we want to know?
- How much in 3 cartons?

What are some strategies?
- multiply
- picture
- place value chart



7 0 8 ✓

```
  1 1
  236
x   3
-----
 708 ✓
```

There are 708 mL in 3 cartons.

Note Catcher:

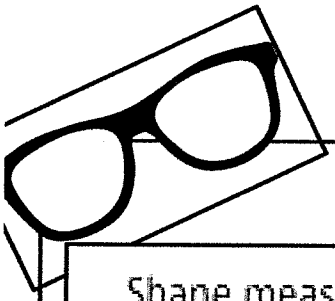
I wonder?

I notice:

CFUs
- what do you notice about all 3 ways?

NOTES

We can use: pictures
tape diagrams (repeated addition)
place value charts
multiplication



Watch Me!

in 1 beaker

Shane measured 457 mL of water in a beaker. Olga measured 3 times as much water. How much water did they measure altogether?

1.) I know 1 beaker has 457 mL
Olga has 3x as much

2.) I want to know how much they have together

They have 1828 altogether.

Shane : 457

Olga : 457 457 457 ?

2 2
457
× 4
1828

CFUs:
walk me through the multiplication again
* Whats a way we can check our work?

I wonder...

Let's Work Together!

Problem 2: Solve 5 × 237 using the partial products algorithm. Then solve using the standard algorithm, and relate the two methods to each other.

$237 \rightarrow 200 + 30 + 7$

$\times\ 5$

5	200	30	7
	1000	150	35

$1000 + 150 + 35 = 1{,}185$ ✓

237×5: $35 + 150 + 1000$

★may need review of expanded form

$$\begin{array}{r} {}^{1}2{}^{3}37 \\ \times\ 5 \\ \hline 1185 \end{array}$$ ✓

what do you notice?
which way is easier? (class hands)

small bag ↓ large ↓

A small bag of chips weighs 48 grams. A large bag of chips weighs three times as much as the small bag. How much will 7 large bags of chips weigh? 3×

What do we know?
small bag = 48
large bag = 3x as much

We need to know?
How much is 1 bag
How much is 7 bags

7 large bags will cost _____

① How much is a large bag?

5×48

$\times\ 7$

336 ✓

$40 + 8$

7	280	56

$280 + 56 = 336$ ✓

② 336 336 336 336 336 336 336

$$\begin{array}{r} {}^{4}2{}^{3}36 \\ \times\ 7 \\ \hline 2352 \end{array}$$

★check w/ partial products

CFUs:
How come 336 isn't our final answer?

You Try!

1. Solve using each method.

Partial Products	Standard Algorithm
a. 34 × 4 30 4 4 | 120 | 16 120 + 16 136 ✓	134 × 4 136 ✓

Partial Products	Standard Algorithm
b. 224 × 3	224 × 3

★what will we do if our answers don't match?

2. Solve. Use the standard algorithm.

a. 251 × 3	b. 135 × 6	c. 304 × 9
d. 405 × 4	e. 316 × 5	f. 392 × 6

Laps:
1) Partial products
2) matching answers
3) Check ~~10~~ 2c

3. The product of 7 and 86 is _____.

4. 9 times as many as 457 is _____.

*Review before exit ticket

5. Jashawn wants to make 5 airplane propellers.
   He needs 18 centimeters of wood for each propeller.
   How many centimeters of wood will he use?

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **William Smith / Spelman**

Learning Target: Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.
Standards:4.NBT.5

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

1. Solve using the standard algorithm.

a.	b.
6 0 8 × 9	5 7 4 × 7

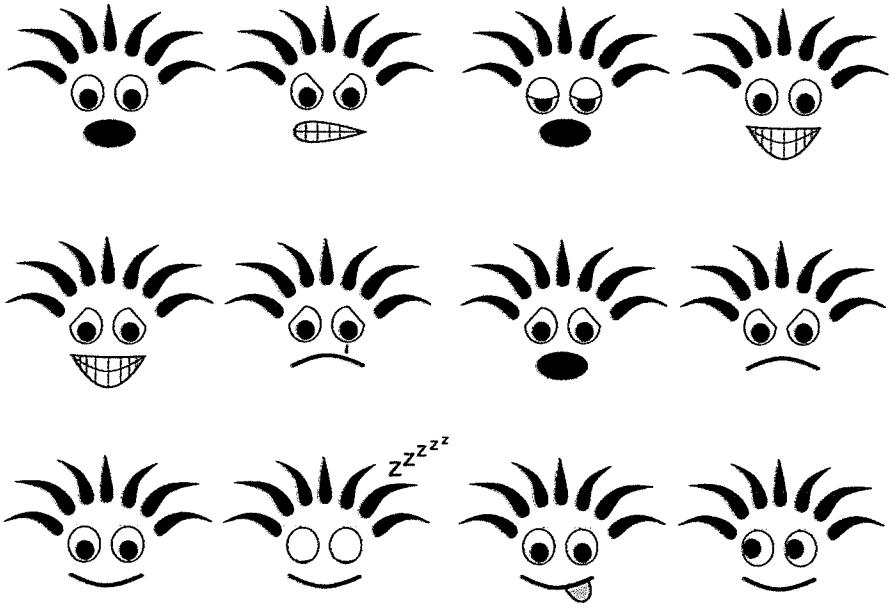
2. Morgan is 23 years old. Her grandfather is 4 times as old. How old is her grandfather?

Grade:

Tuesday

Date: December 8

How are you feeling today?



Learning Target: **Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.**
Standards: 4NBT.5

Do Now: 4.NBT.1

Andrew wrote the number 186,425 on the board. In which number is the value of the digit 6 exactly 10 times the value of the digit 6 in the number Andrew wrote?

A 681,452

B 462,017

C 246,412

D 125,655

Concept Development

The principal wants to buy 8 pencils for every (each) student at her school. If there are 859 students, how many (total) pencils does the principal need to buy?

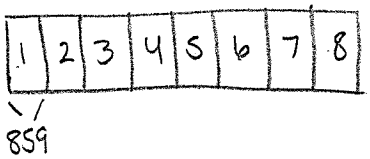
We Know?
8 pencils each
859 students

We want to know?
How many does the school need.
↓

The principal needs to buy 6872 pencils.

Picture

1 unit = 859



$485\overset{7}{9} \rightarrow 800 + 50 + 9$

$\times\ 8$

6872 ✓

8	800	50	9
	6400	400	72

$6400 + 400 + 72 = 6872$ ✓

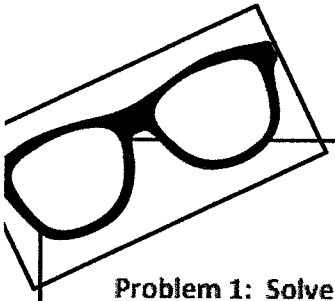
CFUs
- what were we looking for?
- How did we know to multiply?

Note Catcher:

I wonder?

I notice:

NOTES



Watch Me!

Problem 1: Solve 5 × 2,374 using partial products, and then connect to the algorithm.

Partial Product
① expanded form
② multiply parts
③ add

2374 → 2000 + 300 + 70 + 4
× 5

	2000	300	70	4
5	10000	1500	350	20

10000
1500
+ 350
20
11,870 ✓

algorithm

$^{3}\ ^{2}$
2374
× 5
11,870 ✓

CFU
what do you notice about my answers?

I wonder...

Let's Work Together!

Problem 2: Solve 6 × 3,817 using the algorithm. → What does algorithm mean?

$$\begin{array}{r} {}^{1}{}^{4} \\ 3817 \\ \times \quad 6 \\ \hline 22{,}302 \end{array}$$ ✓

CFU
what did I do wrong?

$$\begin{array}{r} 3817 \\ \times \quad 6 \\ \hline 18{,}662 \end{array}$$

*didn't carry #s

There are 5,280 feet in a mile. If Bryan ran 4 miles, how many feet did he run?

What strategies can we use?
How did you know to multiply?
What do we know?
What do we need to know?

5280	5280	5280	5280

$$\begin{array}{r} {}^{3} \\ 5280 \\ \times \quad 4 \\ \hline 21{,}120 \end{array}$$

CFU
check my work w/ partial products.

Bryan ran 21,120 feet.

You Try!

1. Solve using the standard algorithm.

a. 3×42	b. 6×42
c. 6×431	d. 3×431
e. $3 \times 6{,}212$	f. $3 \times 3{,}106$
g. $4 \times 4{,}309$	h. $4 \times 8{,}618$

Check answers w/ PP for a & b

Lap 1: Partic Produc

Lap 2: Answer for f

2. There are 365 days in a common year. How many days are in 3 common years?

3. The length of one side of a square city block is 462 meters. What is the perimeter of the block?

4. Jake ran 2 miles. Jesse ran 4 times as far. There are 5,280 feet in a mile. How many feet did Jesse run?

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **William Smith / Spelman**

Learning Target: Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.
Standards: 4NBT.5

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

1. Solve using the standard algorithm.

a. $2,348 \times 6$	b. $1,679 \times 7$

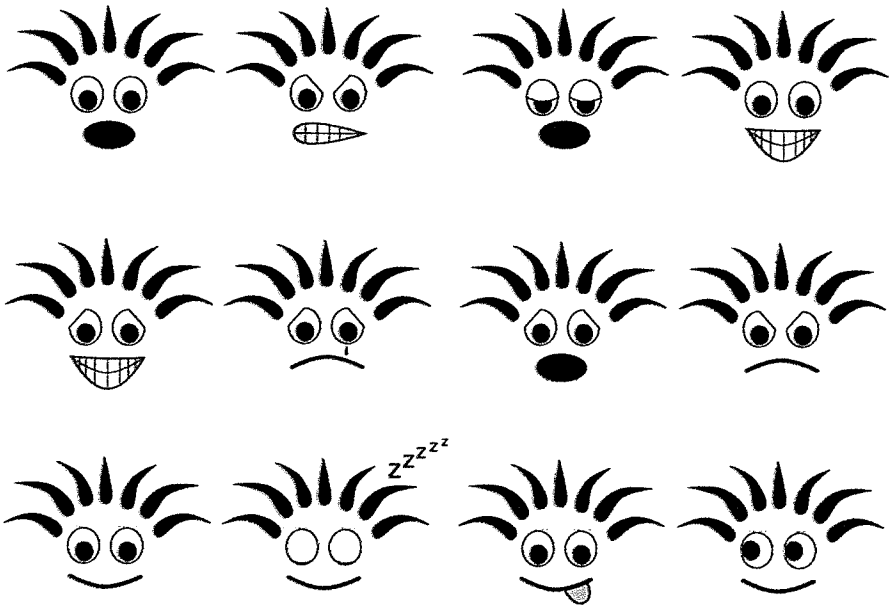
2. A farmer planted 4 rows of sunflowers. There were 1,205 plants in each row. How many sunflowers did he plant?

Grade:

Wednesday

Date: December 9

How are you feeling today?



Learning Target: Connect the area model and the partial products method to the standard algorithm.
Standards: 4NBT.5

Do Now: 4.NBT.2

Which expression shows 125,206 written in expanded form?

~~A 100,000 + 2,000 + 5,000 + 200 + 6~~

B 100,000 + 20,000 + 5,000 + 200 + 6

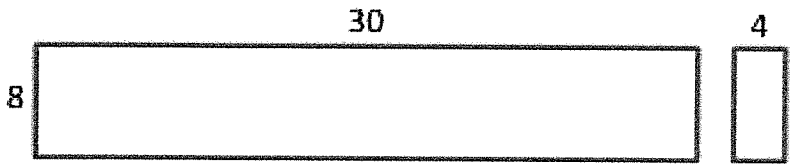
~~C 100,000 + 20,000 + 50,000 + 200 + 6~~

~~D 100,000 + 20,000 + 5,000 + 2,000~~ + 6

Model process of elimination!

100,000 + 20,000 + 5000 + 200 + 0 + 6

Concept Development



Write an equation for the area of each rectangle. Then, find the sum of the two areas.

- whats an equation?
- whats the formula for area?

Area = length × width
A = 30 × 8
A = 240

A = l × w
A = 4 × 8
A = 32

240
+ 32
272

The sum of the two areas is 272.

How can we make this a 1 step
* show w/ rectangle manipulatives.

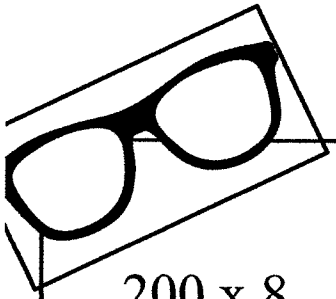
A = l × w
A = (30 + 4) × 8

Note Catcher:

I wonder?

I notice:

NOTES



Watch Me!

200 x 8

200

8 | 1600

200
× 8
1600

234 x 8

	200	30	4
8	1600	240	32

1600
+ 240
+ 32
1,872

CFUs

How is our picture similar to a place value chart?

I wonder...

Let's Work Together!

316 x 4

CFU
what ways can we solve this?

What if our answers don't match?

Area

300	10	6
1200	40	24

4

1200
+ 40
+ 24
1,264 ✓

Partial Products

316
x 4
24
40
1200
1,264 ✓

Algorithm

2
316
x 4
1,264 ✓

A cafeteria makes 4,408 lunches each day.
How many lunches are made Monday through Friday?

★ choose a strategy to solve
4408
x 5

what strategies do we know?

what do we know:
4,408 each day

We need to know:
How much for M → F

↳ _____ lunches are made M-F.

1	2	3	4	5
M	T	W	Th	F
4408	4408	4408	4408	4408

4
24408
x 5
22,040

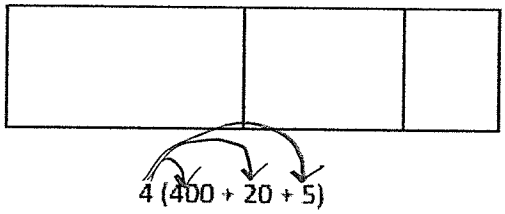
★ show call a correct example of each

You Try!

1. Solve the following expressions using the standard algorithm, the partial products method, and the area model.

a. 425 × 4

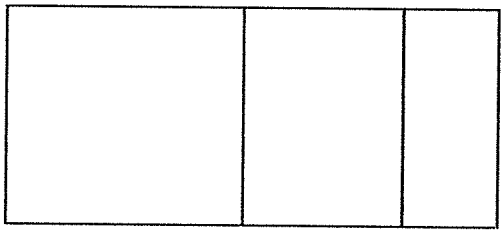
*discuss distributive property



4 (400 + 20 + 5)

(4 × _____) + (4 × _____) + (4 × _____)

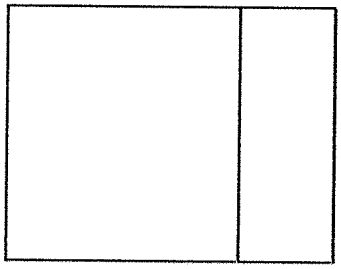
b. 534 × 7



7 (____ + ____ + ____)

(__ × _____) + (__ × _____) + (__ × ____)

c. 209 × 8



__(____ + ____)

(__ × _____) + (__ × _____)

Laps

1) letter b

2) 1st word problem

Cayla's school has 258 students. Janet's school has 3 times as many students as Cayla's. How many students are in Janet's school?

A restaurant sells 1,725 pounds of spaghetti and 925 pounds of linguini every month. After 9 months, how many pounds of pasta does the restaurant sell?

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **William Smith / Spelman**

Learning Target: Connect the area model and the partial products method to the standard algorithm.
Standards: 4NBT.5

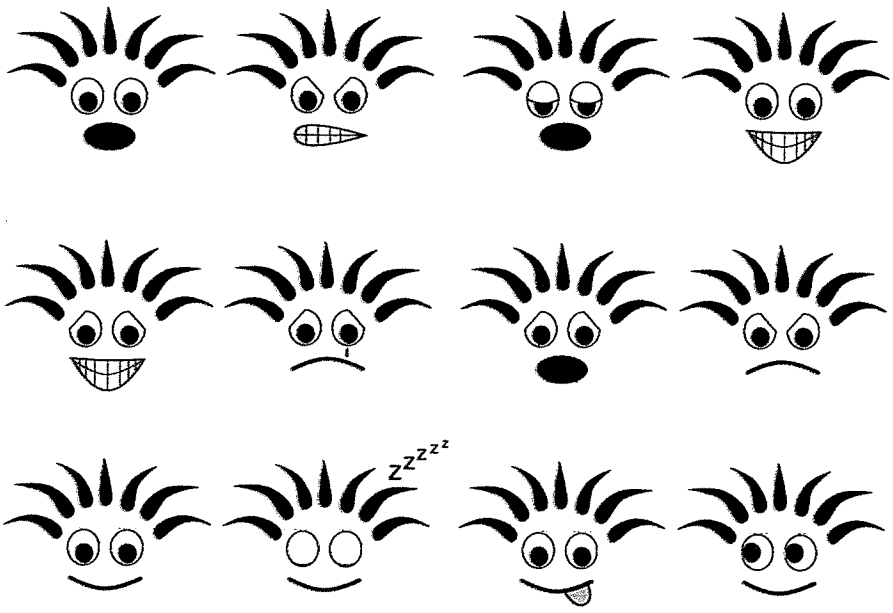
Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

Grade:

Thursday

Date: December 10

How are you feeling today?



Learning Target: **Solve two-step word problems, including multiplicative comparison.**
Standards: 4.OA.1 4.OA.2 4.OA.3 4.NBT.5

Do Now: 4.NBT.2

Changed in packet, repeat from yesterday whoops!

Which expression shows 125,206 written in expanded form?

A 100,000 + 2,000 + 5,000 + 200 + 6

B 100,000 + 20,000 + 5,000 + 200 + 6

C 100,000 + 20,000 + 50,000 + 200 + 6

D 100,000 + 20,000 + 5,000 + 2,000 + 6

NOTES

Watch Me!

The table shows the cost of party favors. Each party guest receives a bag with 1 balloon, 1 lollipop, and 1 bracelet. What is the total cost for 9 guests?

Item	Cost
1 balloon	26¢
1 lollipop	14¢
1 bracelet	33¢

I Know

1 balloon = 26
1 lollipop = 14
1 bracelet = 33

① 1 bag will cost

$$\begin{array}{r} 26 \\ +\ 14 \\ \hline 33 \\ \hline 73 \end{array}$$

② For 9 guests

$$\begin{array}{r} 73 \\ \times\ 9 \\ \hline 657 \text{ cents} \end{array}$$

I need to know

How much does 1 whole bag cost?

What about for 9 guests?

↳ The total cost for 9 guests is 657 cents.

I wonder...

CFU

How come 73 wasn't my final answer?

what info did I need to find 1st?

Let's Work Together!

The Turner family uses 548 liters of water per day. The Hill family uses 3 times as much water per day. How much water does the Hill family use per week?

We Know:
T family uses 578 per day
H uses 3x per day

We need to know
How much H family uses per day!

What about the week?

① day
$548 \times 3 = 1644$

② week
How many days in a week?
M T W Th F S S
1644 1644 1644 1644 1644 1644 1644
$1644 \times 7 = 11{,}508$

→ The Hill family uses 11508 per WEEK!

CFUs
what units of time? days + weeks
why did we multiply by 7.

Jayden has 347 marbles. Elvis has 4 times as many as Jayden. Presley has 799 fewer than Elvis. How many marbles does Presley have?

* Turn + Talk to find out how much each boy has (Jayden + Elvis)
show call exemplar work.

Jayden → 347
Elvis → $347 \times 4 = 1388$ ①

② $1388 - 799 = 589$

Presley has 589 marbles.

CFU
what did I do wrong:
799
−347
452 marbles

You Try!

Laps
1) plan for #1
2) Answer for #2

4. The table shows the number of stickers of various types in Chrissy's new sticker book. Chrissy's six friends each own the same sticker book. How many stickers do Chrissy and her six friends have altogether?

*show call answer (or make a WE DO)

Type of Sticker	Number of Stickers
flowers	32
smiley faces	21
hearts	39

5. The small copier makes 437 copies each day. The large copier makes 4 times as many copies each day. How many copies does the large copier make each week?

6. Jared sold 194 Boy Scout chocolate bars. Matthew sold three times as many as Jared. Gary sold 297 fewer than Matthew. How many bars did Gary sell?

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **William Smith / Spelman**

Learning Target: **Solve two-step word problems, including multiplicative comparison.**
Standards: **4.OA.1 4.OA.2 4.OA.3 4.NBT.5**

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

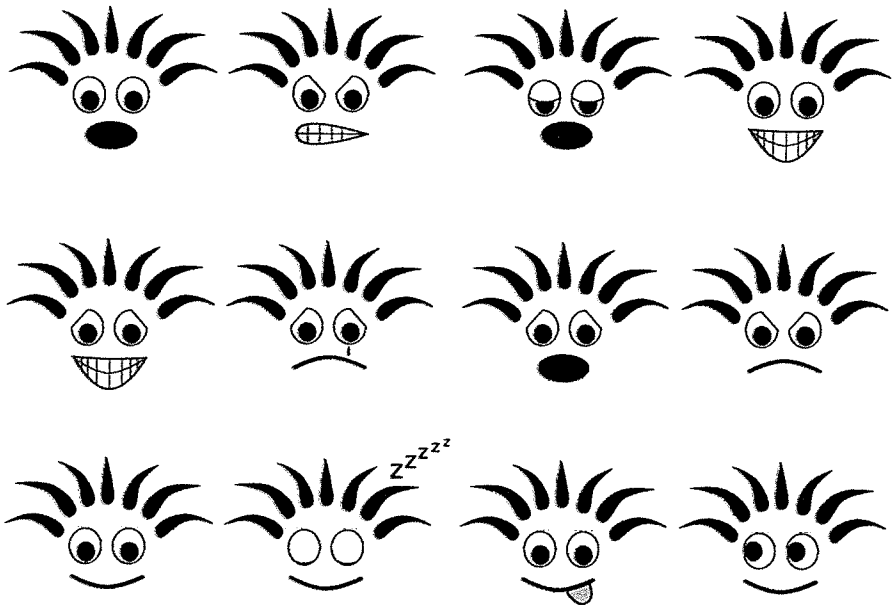
Jennifer has 256 beads. Stella has 3 times as many beads as Jennifer. Tiah has 104 more beads than Stella. How many beads does Tiah have?

Grade:

Friday

Date: December 11

How are you feeling today?



Learning Target: **Use multiplication, addition, or subtraction to solve multi-step word problems.**
Standards: 4.OA.1 4.OA.2 4.OA.3 4.NBT.5

Do Now: 4.NBT.2

Which number sentence is true?

A 376,425 > 367,419

B 337,425 > 337,524

C 336,425 < 335,426

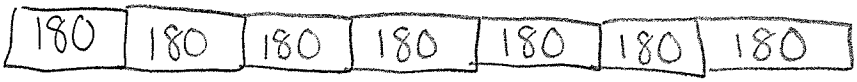
D 327,425 < 327,416

* Review symbols if needed

* stacking strategy w/ process of elimination

Concept Development

Over the summer, Kate earned $180 each week for 7 weeks. Of that money, she spent $375 on a new computer and $137 on new clothes. How much money did she have left?



5 | 180
x 7
1,260 total

11 15 10
0 Y 2 ~~6~~ Q
- 375
8 8 5 15
- 137
$ 7 4 8

We Know
- 180 x 7 will give us the total
- We know she spent 375 + 137, spent means −

We need to know
- total earned
- how much was left

Kate had $748 left.

CFU: why did we subtract to find her total?

Note Catcher:

I wonder?

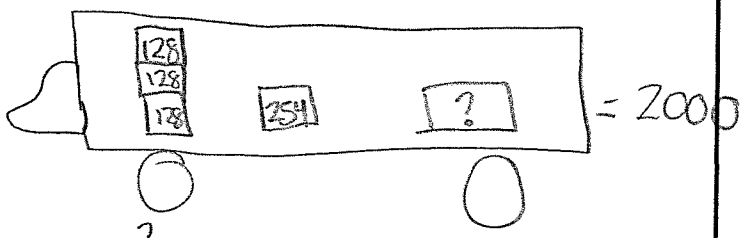
I notice:

Let's Work Together!

Three boxes weighing 128 pounds each and one box weighing 254 pounds were loaded onto the back of an empty truck. A crate of apples was then loaded onto the same truck. If the total weight loaded onto the truck was 2,000 pounds, how much did the crate of apples weigh?

CFU
Why isn't 638 my answer?

We Know:
3 boxes x 128 lbs =
1 box x 254 lbs =
Total = 2000 lbs
We don't know how much the apples weigh.



$128 \times 3 = 384$

$384 + 254 + \_\_\_\_ = 2000$

$384 + 254 = 638$

$638 + \_\_\_\_ = 2000$

The apples weigh 1362 pounds.

* inverse operations?

2000 − 638 = 1362

In one month, Charlie read 814 pages. In the same month, his mom read 4 times as many pages as Charlie, and that was 143 pages more than Charlie's dad read. What was the total number of pages read by Charlie and his parents?

4x

① Need to Know:

Charlie: 814

Mom: 4056 (814 × 4 = 4056)

Dad: 3913 (4056 − 143 = 3913)

② Whole Family

$4056 + 3913 + 814 = 8{,}783$

Charlie's family read 8,783 pages.

CFUs
Who read more mom or dad?
How do you know from the question?

You Try!

Laps
1) plans
2) answer

1. A pair of jeans costs $89. A jean jacket costs twice as much. What is the total cost of a jean jacket and 4 pairs of jeans?

2. Sarah bought a shirt on sale for $35. The original price of the shirt was 3 times that amount. Sarah also bought a pair of shoes on sale for $28. The original price of the shoes was 5 times that amount. Together, how much money did the shirt and shoes cost before they went on sale?

EXIT TICKET

Name:_____ **Date:**_____
BCCSG **William Smith / Spelman**

Learning Target: **Use multiplication, addition, or subtraction to solve multi-step word problems.**
Standards: 4.OA.1 4.OA.2 4.OA.3 4.NBT.5

Directions: Answer the questions below. Make sure you show work for every question. Record your answer on Google Classroom

.. Michael earns $9 per hour. He works 28 hours each week. How much does he earn in 6 weeks?

!. David earns $8 per hour. He works 40 hours each week. How much does he earn in 6 weeks?

). After 6 weeks, who earned more money? How much more money?

Grade: