

» Please sign in and have a seat.

Welcome!
Lisa J. Mails
Elementary





Mindset and Math

- » Some kids are good at math and some are not. (ability grouping)
- » Math is hard.
- » If you can memorize facts and steps, you can do well.
- » There are right and wrong answers. (fear of making mistakes)
- » The teacher tells us how and we follow the directions.
- » Focus on speed.

Traditional Math



- » All kids can be good at math.
- » We need to focus on true understanding - not memorizing, speed, or simply following directions.
- » There are many ways to get to an answer. Let's talk about your way. Let's explore different ways.
- » **Mistakes are opportunities to learn. We need not fear them – they are part of the process of learning!**

Math Today



- » Fixed vs. Growth Mindset
- » Carol Dweck, Ph.D. – Mindset: The New Psychology of Success
- » Ted Talk by Eduardo Briceno:
<http://www.mindsetworks.com/webnav/videogallery.aspx>

Growth Mindset



- » Talk to your child about their process. Talk to them about the science of the brain.
- » Acknowledge their struggle. Encourage them to persevere.
- » Model how you handle struggle in everyday situations. Talk out loud about it when you are facing something difficult.

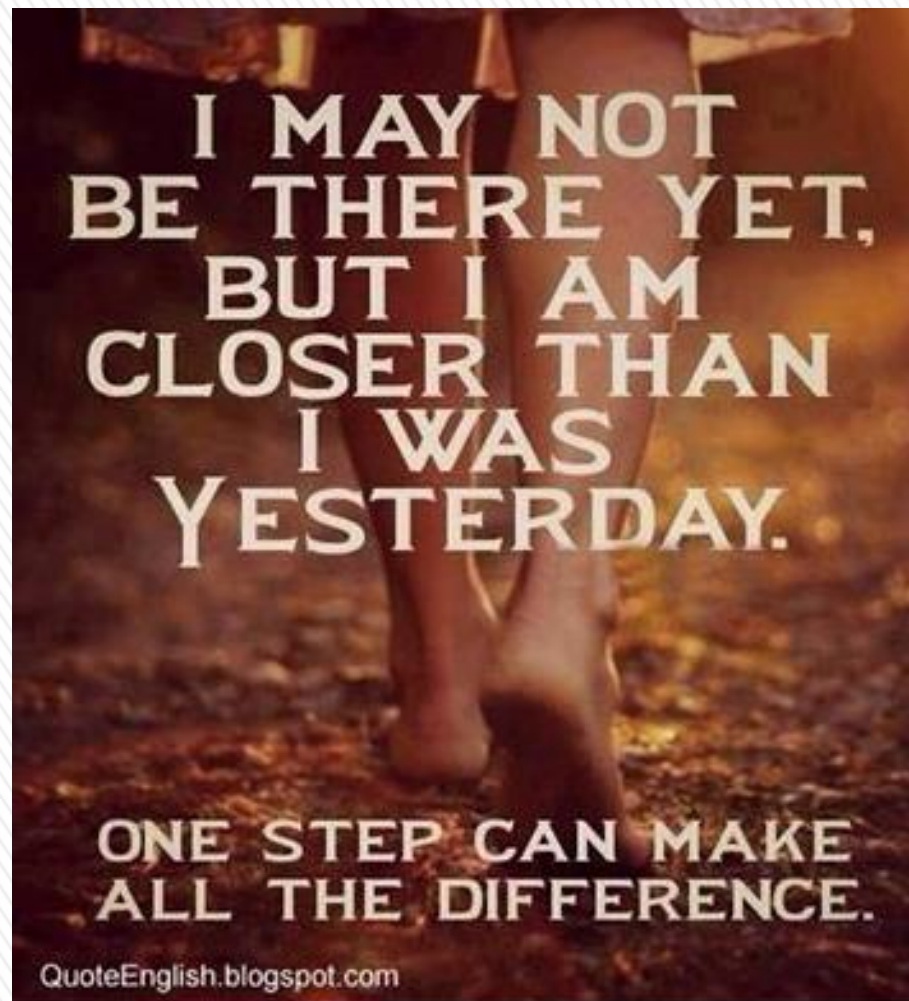
Changing the Conversation



- » Change your dinner conversation, “What did you struggle with today?” Make it a positive.
- » Consider how you praise your child. Praise effort above all. Be thoughtful about how you give them feedback. “What Every Parent Needs to Know About Praise”
- » Focus on the Power of **Yet**

Changing the Conversations





The Power of Yet >

- » Content Standards
- » Practice Standards

Common Core Standards





Purpose of Common Core State Standards



What Do Employers Want?

- » Problem-Solving Skills
- » Quick Learners
- » Motivation
- » Self-Starter
- » Ability to Analyze/Interpret Data
- » Oral Communication Skills
- » Written Communication Skills
- » Job-Specific Computer Skills
- » Teamwork Attitude
- » Innovative Thinking



CCSS Math

Understanding
the math



CCSS Math

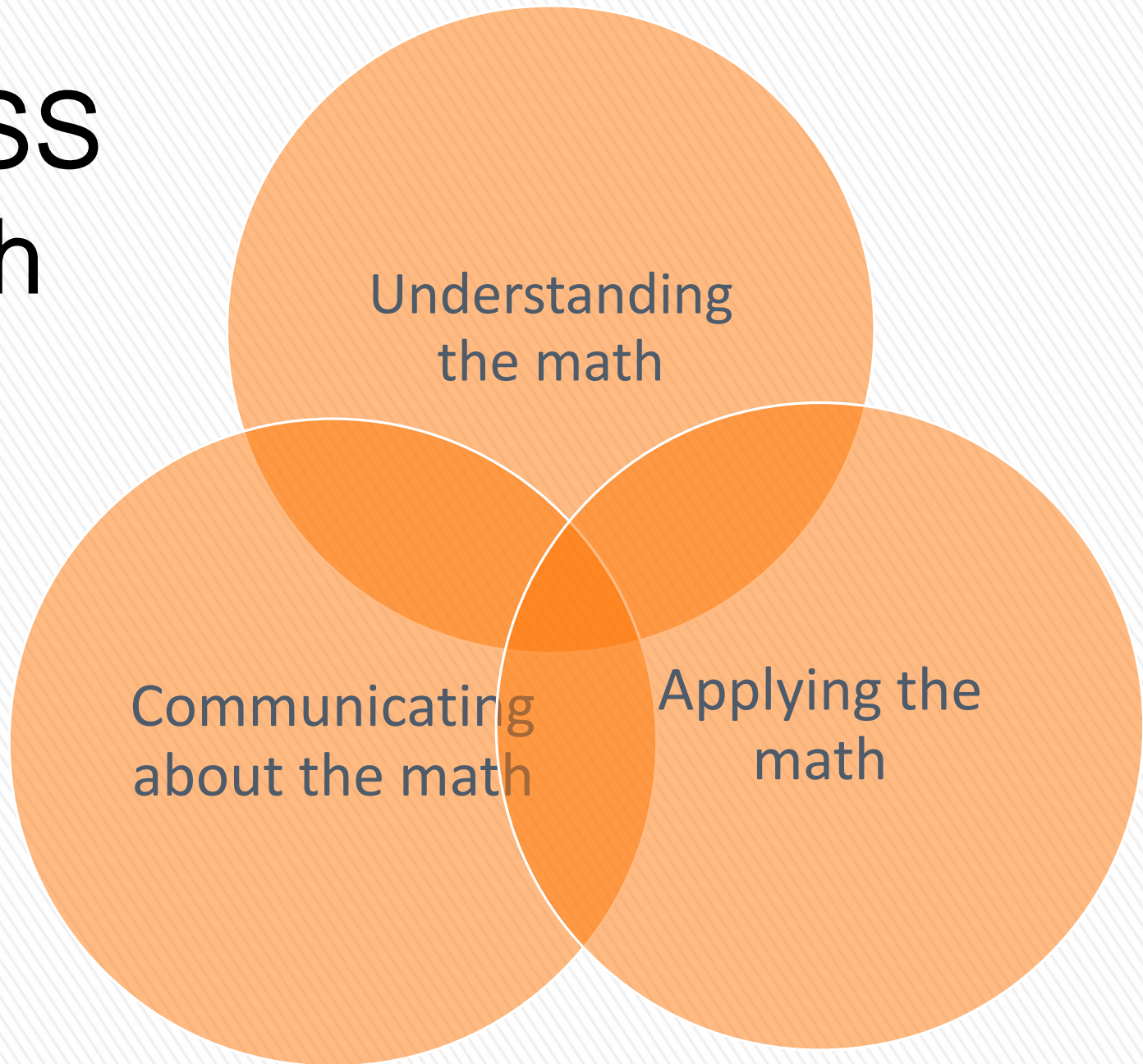


Understanding
the math

Communicating
about the math



CCSS Math



Char has two coupons when she bought her shoes at Macys. The clerk said the \$10.00 off coupon is usually the better deal. Was the clerk correct? Explain your reasoning.

WEDNESDAY, NOV. 17 7AM-11PM
PREVIEW DAY TUESDAY 8AM-11PM

TUES OR WED 'TIL 1PM; CANNOT BE USED ON SPECIALS OR SUPER BUYS

\$10 OFF!

★ **macys WOW! PASS**
ALL SALE & CLEARANCE APPAREL
AND SELECT HOME ITEMS

Excludes: special, sale, buy, furniture, mattresses, floor covering, rug, shoes/electronics/appliances/groceries, gift cards, jewelry, work shoes, services, purchases, special orders, selected licensed items, special purchases, services, accessories. Cannot be combined with any savings, participation, extra discount or credit offer, except opening a new Macy's account. Order amount must exceed \$10.00. All items, all such eligible items, as shown on receipt. When you return an item, you forfeit the savings allocated to that item. This coupon has no cash value and may not be redeemed for cash, used to purchase gift cards or applied as payment on credit for your account. EXTRA 10% OFF IS APPLIED TO REGULAR PRICES. Purchase must be \$25 or more, exclusive of tax and delivery fees.

YOUR PURCHASE OF \$25 OR MORE.
VALID 11/16 OR 11/17/10 'TIL 1PM. LIMIT ONE PER CUSTOMER.

MORNING SPECIALS
8AM-1PM TUESDAY &
7AM-1PM WEDNESDAY

the magic of
macys
.com

VIP SALE
EXTRA 20% OFF

enjoy your VIP discount for him, her, kids, home & jewelry!

 women	 men	 shoes	 for the home
 juniors	 kids	 jewelry	 bed & bath
 handbags	 watches	 furniture	 kitchen

+ free shipping WITH \$99 PURCHASE

EXTRA 10% OFF watches, electronics, furniture, mattresses & rugs.
Free Shipping applied at checkout. U.S. shipping only, excludes furniture & mattresses, other exclusions apply.

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THE MATHEMATICS STANDARDS



2 Sets of Standards

K	1	2	3	4	5	6	7	8
Geometry								
Measurement and Geometry	Statistics and Probability							
Number and Operations	The Number System							
Operations and Algebra	Expressions and Equations							
Counting and Cardinality	Fractions			Relationships			Functions	

What

Content Standards

Standards for Mathematical Practice

1. Make sense of problems & persevere in solving them	2. Reason abstractly &	3. Construct viable arguments &	4. Model with mathematics
5. Use appropriate tools strategically	How		
		structure	look for & express regularity in repeated reasoning



Common Core Content Standards are **grade-specific** that focus on what students should **understand and be able to do** in the study of **mathematics**.

“WHAT”

K	1	2	3	4	5	6	7	8
Geometry								
Measurement and Data					Statistics and Probability			
Number and Operations in Base Ten					The Number System			
Operations and Algebraic Thinking					Expressions and Equations			
Counting and Cardinality				Number and Operations--- Fractions		Ratios and Proportional Relationships		Functions



Standards for Mathematical Practice describe what **students** should be **doing** as they learn mathematics. It describes how students should be engaging with the mathematics and fellow students.

“How”

1. Make sense of problems & persevere in solving them
2. Reason abstractly & quantitatively
3. Construct viable arguments & critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for & make use of structure
8. Look for & express regularity in repeated reasoning



Math Content Standards

Mathematically Proficient Students

Standards for Mathematical Practice

K	1	2	3	4	5	6	7	8
Geometry								
Measurement and Data				Statistics and Probability				
Number and Operations in Base Ten				The Number System				
Operations and Algebraic Thinking				Expressions and Equations				
Counting and Cardinality		Number and Operations--- Fractions	Ratios and Proportional Relationships	Functions				

1. Make sense of problems & persevere in solving them
2. Reason abstractly & quantitatively
3. Construct viable arguments & critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for & make use of structure
8. Look for & express regularity in repeated reasoning

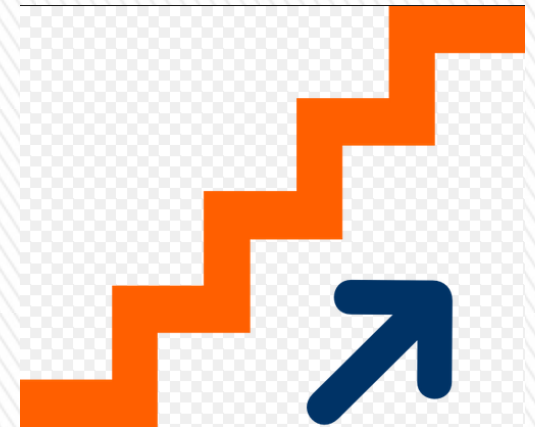




Focus



Rigor



Coherence

CCSS Shifts in Mathematics



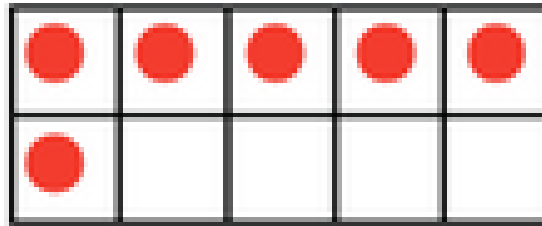
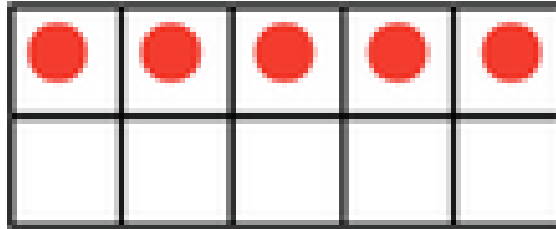
Rigor

Fluency

Application

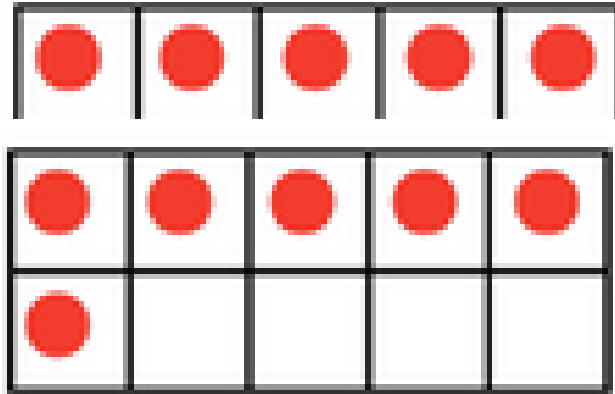
**Deep
Understanding**





$$5 + 6$$



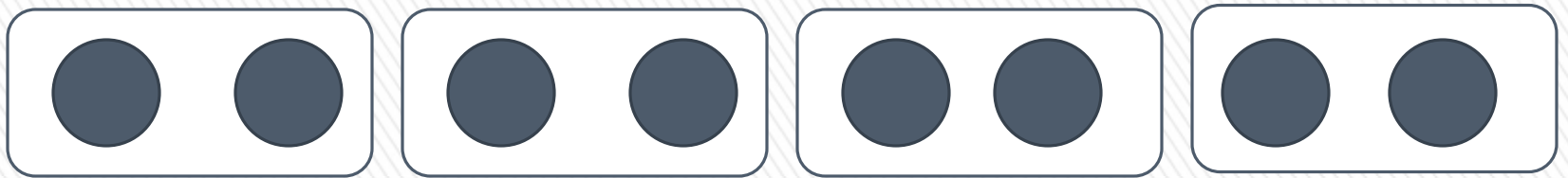


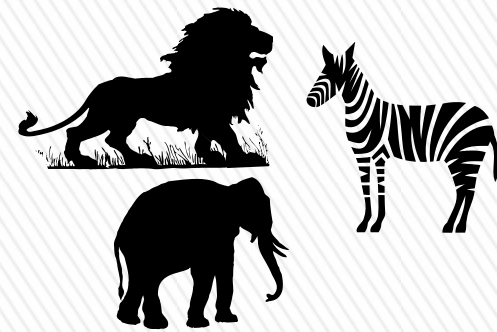
$$5 + 5 + 1 =$$
$$10 + 1 = 11$$



$$8 \div 2$$

How many groups of 2 are in 8?



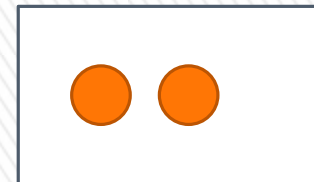
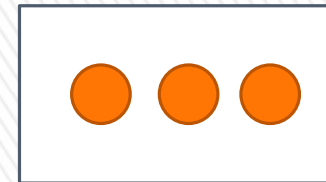
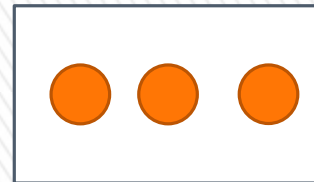
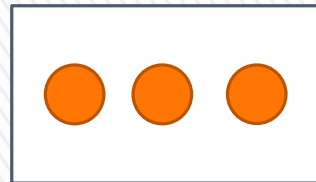
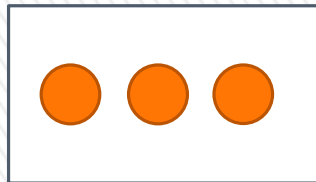
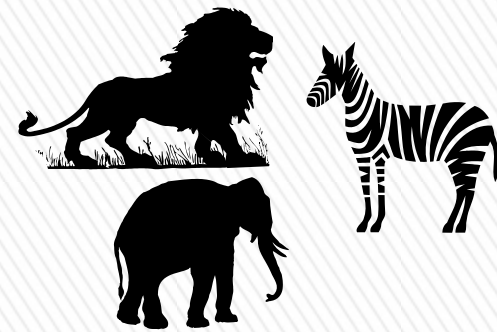


19 children are taking a mini-bus to the San Diego Zoo. They will have to sit either 2 or 3 to a seat. The bus has 7 seats. How many children will have to sit two to a seat, and how many children will have to sit three to a seat?

Solve this task in at least two different ways.

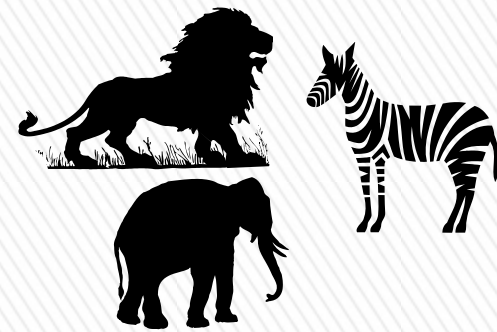
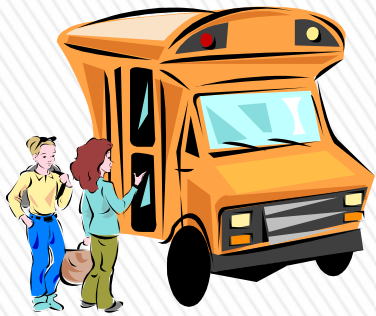
Write your answer in a complete sentence.

Going to the Zoo >



Four students will sit two to a seat and 15 students will sit 3 to a seat.





$$2 \times 5 = 10$$

$$3 \times 2 = 6$$

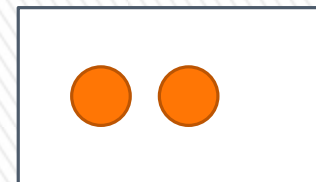
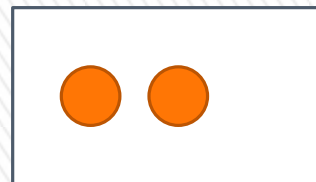
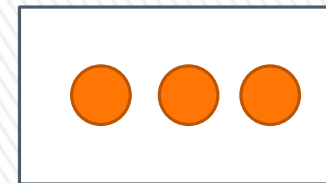
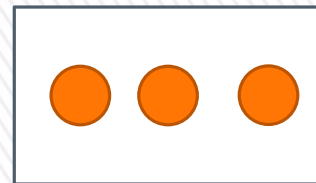
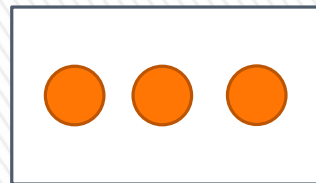
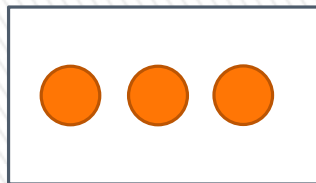
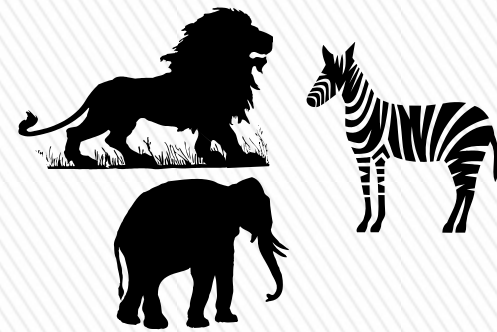
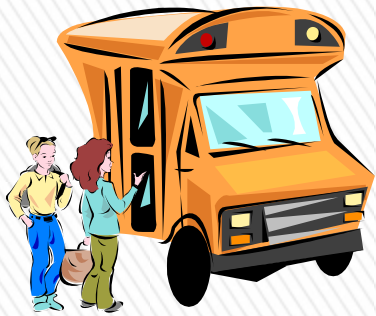
$$2 \times 3 = 6$$

$$3 \times 4 = 12$$

$$2 \times 2 = 4$$

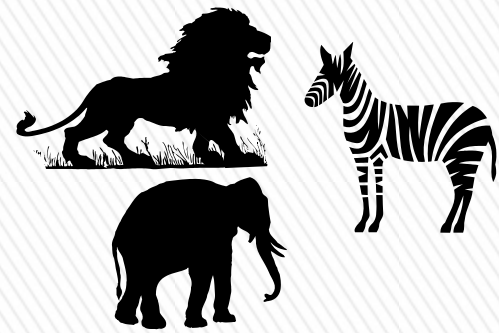
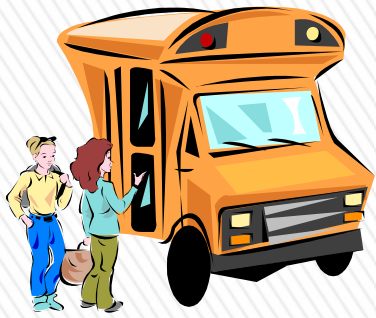
$$3 \times 5 = 15$$





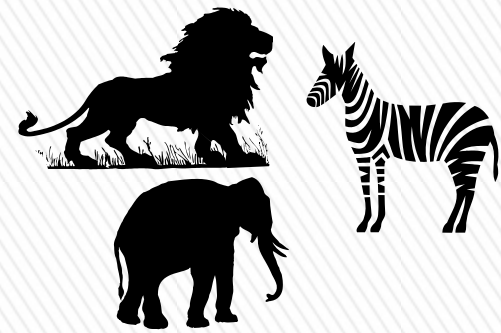
$$2 \times 2 = 4$$
$$3 \times 5 = 15$$





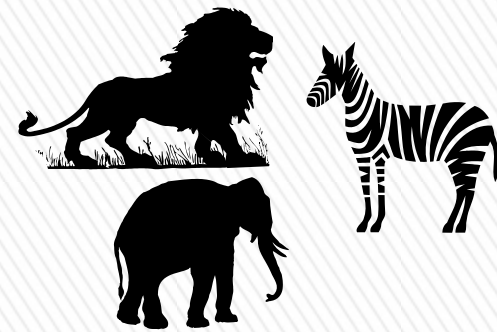
$$7 \overline{) 19} \quad 2$$





$$\begin{array}{r} 2 \\ 7 \overline{) 19} \\ \underline{-14} \\ 5 \end{array}$$



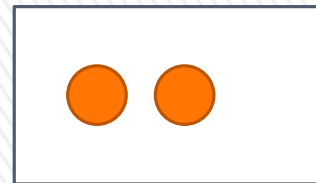
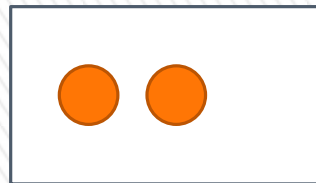
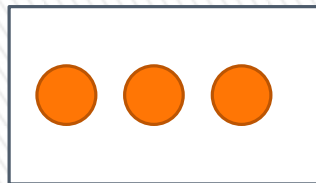
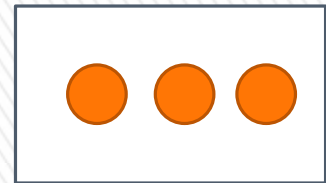
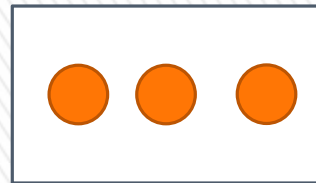
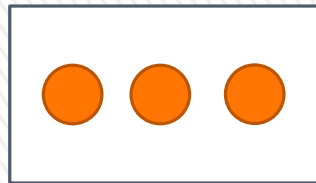
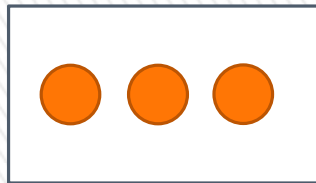
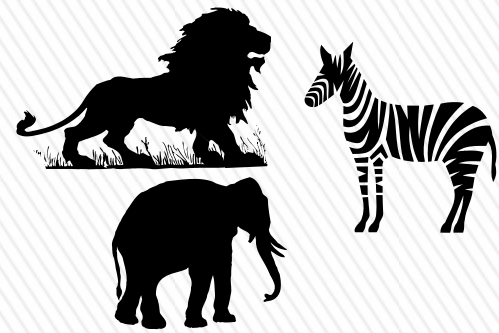
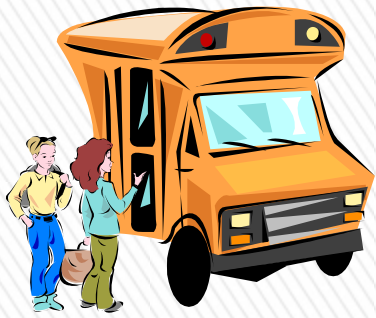


What does the 5
represent?

$$\begin{array}{r} 2 \\ 7 \overline{) 19} \\ \underline{-14} \\ 5 \end{array}$$

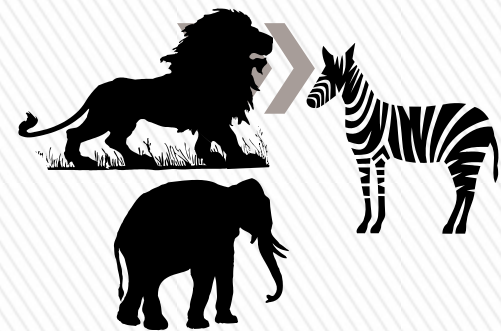
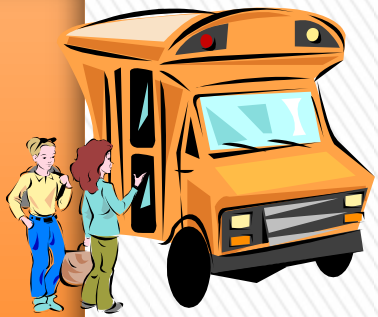
What does the 2
represent?



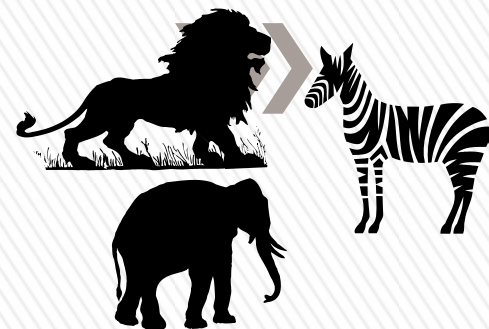


$$\begin{array}{r} 2 \\ 7 \overline{) 19} \\ \underline{-14} \\ 5 \end{array}$$

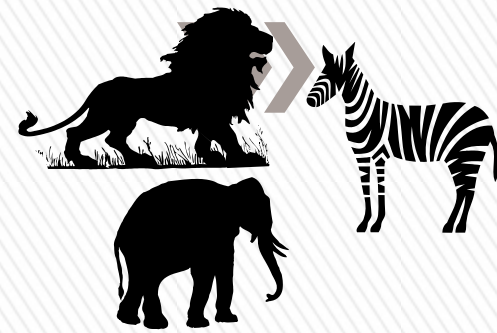




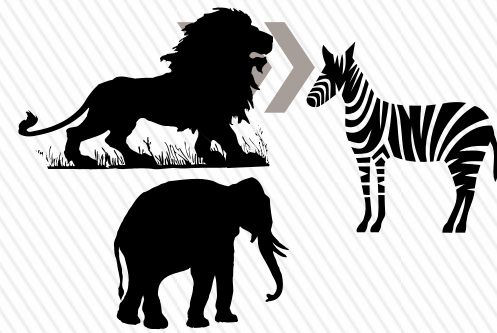
2 to a seat	Students	3 to a seat	Students	Total
5	10	2	6	16



2 to a seat	Students	3 to a seat	Students	Total
5	10	2	6	16
4	8	3	9	17



2 to a seat	Students	3 to a seat	Students	Total
5	10	2	6	16
4	8	3	9	17
3	6	4	12	18



2 to a seat	Students	3 to a seat	Students	Total
5	10	2	6	16
4	8	3	9	17
3	6	4	12	18
2	4	5	15	19

x = # of seats of students sitting 2 to a seat

y = # of seats of students sitting 3 to a seat

$$x + y = 7$$

$$2x + 3y = 19$$

$$x + y = 7$$

$$x + 5 = 7$$

$$-2x + -2y = -14$$

$$\begin{array}{r} 2x + 3y = 19 \\ \hline \end{array}$$

$$y = 5$$

$$x = 2$$

4 students will sit 2 to a seat.
15 students will sit 3 to a seat.

- » Persevere
- » Make sense of problems

Practice Standard #1 >

- » Make sense of numbers in problems
- » Use coherent representations of problems

Practice Standard #2 >

- » Construct viable arguments
- » Critique reasoning of others

Practice Standard #3 >

- » Model with mathematics
- » Real-world applications

Practice Standard #4 >

» Use appropriate tools strategically

Practice Standard #5 >

- » Communicate precisely in mathematics
- » Academic vocabulary

Practice Standard #6 >

» Look for and make use of structure

Practice Standard #7 >

- » Look for and express regularity in repeated reasoning.

Practice Standard #8 >

» Homework Process

- > If your child is having problems with the homework:
 - + Ask questions.....what do you remember?
 - + How do you think you would solve this?
 - + What have you done before that can help you with this?

- + Then have your child write out his/her thinking.
- + What he/she tried first, second, etc.
- + Send the written process attached to the homework.
- + The teacher will accept it for credit.

HOMework

