Shades of Math

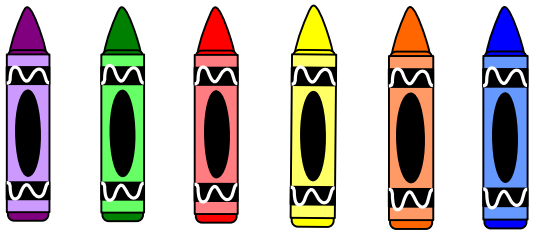
Grades 3-4, Groups of 2-4

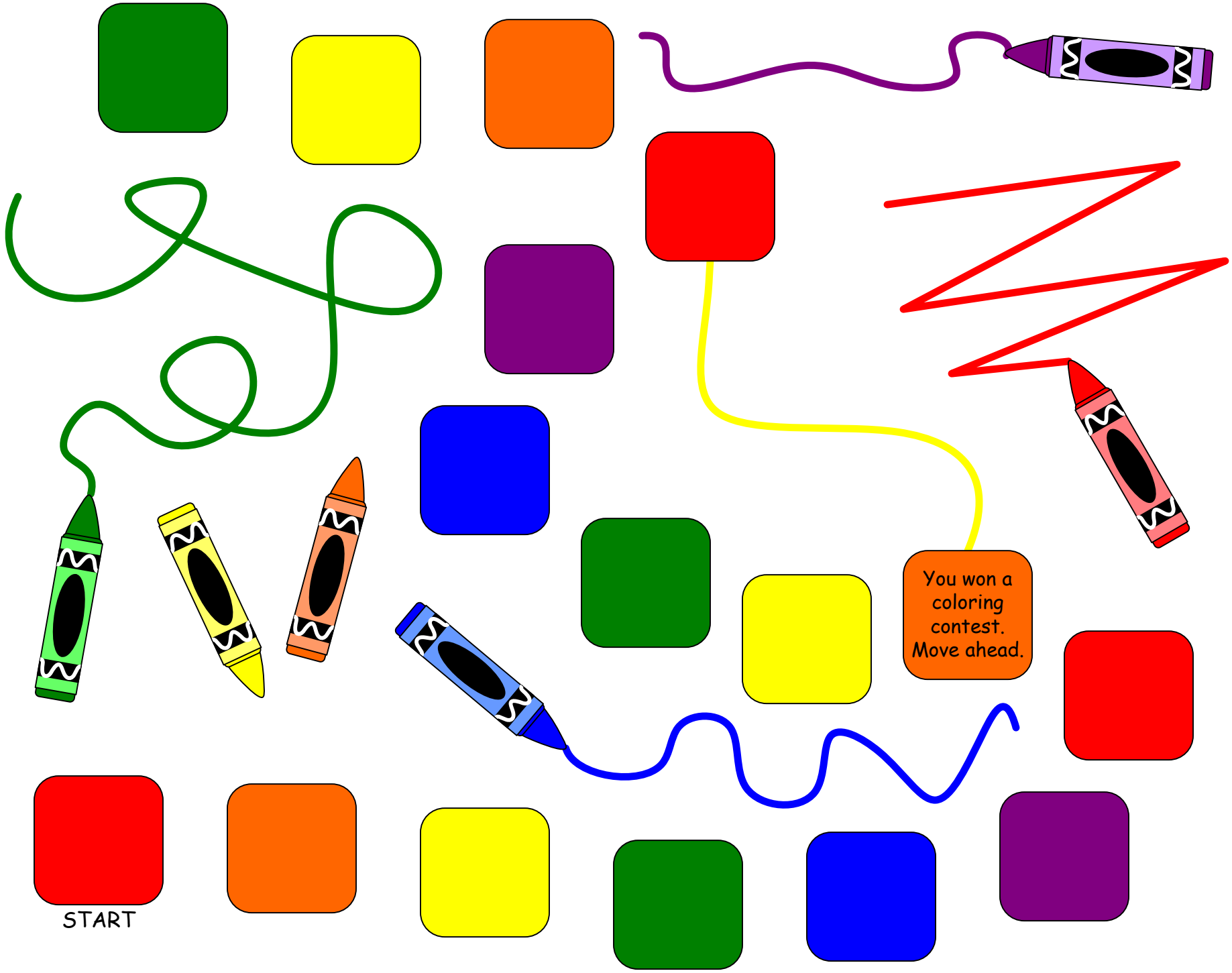
Objective: To reach the end of the color path first.

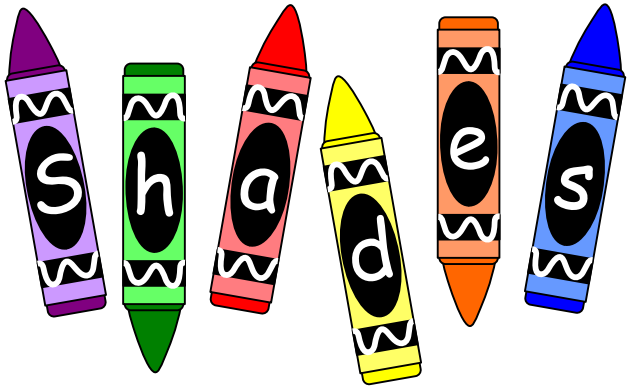
How to Play:
1. Start with the person whose name comes first alphabetically.
2. Roll the color die. Move to the next space with the color rolled. Read a question that is on the same color paper as the color rolled.
3. If the team agrees that the player is correct, the player may stay on the space. If the team disagrees, discuss the answer to reach an agreement. If the player is correct, the player may stay on the space. If the player is incorrect, the player must go back to the space he or she was on previously.
4. The first player to reach the finish with an exact roll or who is ahead when time to play runs out wins.

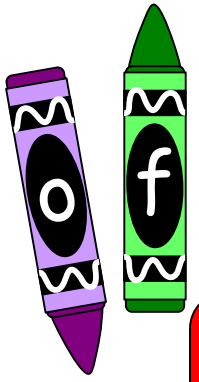
How To Assemble:
Laminate the game board pages to the inside of a file folder, one on each side so that the game board is complete when the file folder is open and laying flat. Laminate the above rules to the front of the file folder if desired. Laminate the page of charts and store it in the folder for reference during game play. Laminate the game cards and game pieces before cutting them out. Cut out the color circles for the die. Remove the back paper on the sticker. Place one circle on each side of the wood cube to create a die.

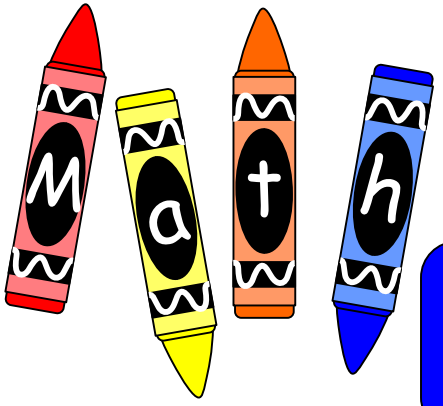
game pieces




START
You won a coloring contest. Move ahead.

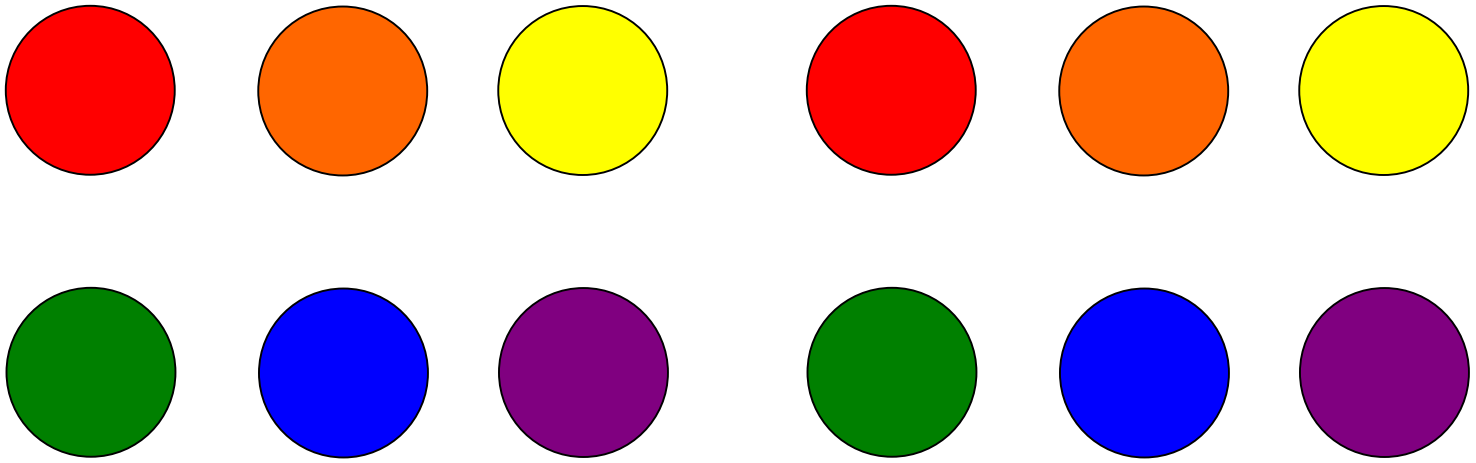




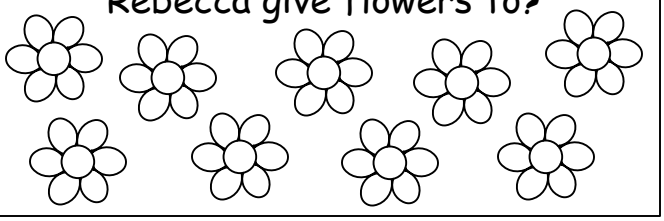


FINISH

You broke a crayon. Move back two.



Objective One

Name the order of place value starting with "ones," ending with "hundred thousands".	How do you read numbers?
How do you compare numbers?	How do you order numbers?
How do you find the value of coins and bills?	What is a fraction?
What is 648 rounded to the nearest hundred?	Rebecca had 9 flowers. She wanted to give 3 flowers to each of her friends. How many friends can Rebecca give flowers to? 

Objective One

The class is having a party. There are 7 tables. 6 people can sit at each table. How many people can sit at the tables in all?

The table shows how many balls Gloria had by color.

Gloria's Balls

red	yellow	blue	green
4	2	1	3

What fractional part of the balls is yellow?

Which figure shows the greatest amount shaded?

What number means the same as 50,000+4,000+300+60+9?

- ⬭ 5,369
- ⬭ 54,369
- ⬭ 50,459
- ⬭ 54,609

What is the place value of the 8 in the number 384,602?

- ⬭ ones
- ⬭ thousands
- ⬭ hundreds
- ⬭ ten thousands

There are eight hundred twenty nine thousand, four hundred six people living in the city. How is this number written as a numeral?

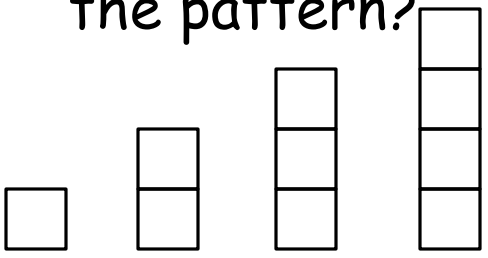
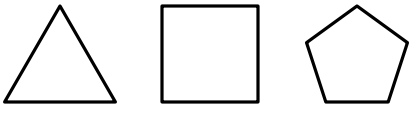
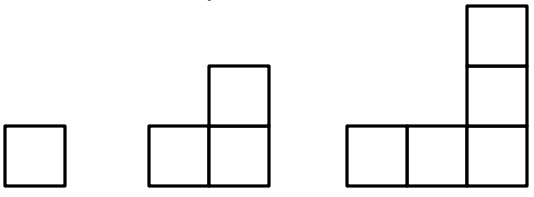
- ⬭ 9,829
- ⬭ 829,460
- ⬭ 829,406
- ⬭ 82,946

Say the numbers below in order from least to greatest.

3,295
3,593
3,953
3,539

What is the value of this collection of coins?

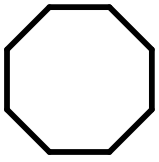
Objective Two

What are patterns?	Are there patterns in multiplication? Give an example.
Are there patterns in fact families? Give an example.	How can a table show a pattern?
What number is missing in the pattern? 82 | 74 | 66 | | 50 | 42	What comes next in the pattern? 
What comes next in the pattern? 	What comes next in the pattern? 

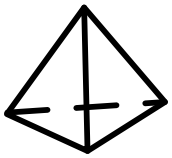
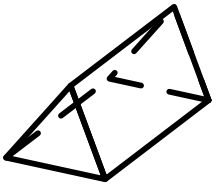
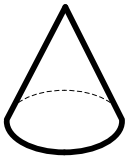
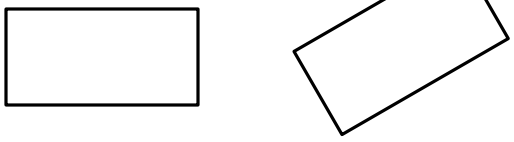
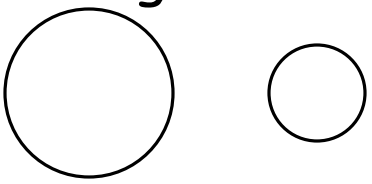
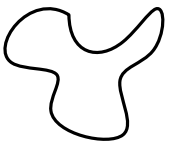
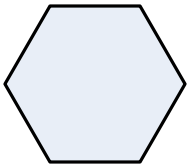
Objective Two

Name the fact family for 6, 5, and 30.	Name the fact family for 7, 56, and 8.
What number is missing in the pattern below? 6, 12, 18, _____, 30	Joe is putting candy in bags in groups of 7. Which list shows numbers in groups of 7? ⬭ 7, 14, 22, 29 ⬭ 21, 28, 35, 42 ⬭ 7, 15, 22, 29 ⬭ 14, 21, 28, 34
What is the 7^{th} number in the pattern below? 1, 2, 4, 7, 11,	What is the 6^{th} number in the pattern below? 2, 4, 6, 8,
Brenda is putting bracelets into boxes. She puts 4 bracelets in each box. Which list shows numbers in groups of 4? ⬭ 4, 8, 15, 20 ⬭ 4, 7, 10, 13 ⬭ 8, 12, 16, 20 ⬭ 8, 10, 12, 14	Name the fact family for 4, 12, and 8.

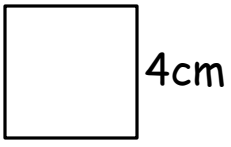
Objective Three

What is a plane figure?	What is a solid figure?
What is "symmetry"?	How do you know if shapes are congruent?
How can you use a number line?	What shape is a soccer ball?
What is the shape below? 	What is the shape below? 

Objective Three

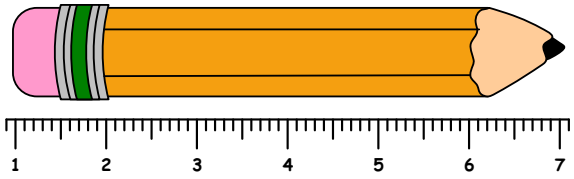
What is the shape below? 	What is the shape below? 
What is the shape below? 	What is the shape below? 
Are these shapes congruent? 	Are these shapes congruent? 
Does this shape have a line of symmetry? 	Does this shape have a line of symmetry? 

Objective Four

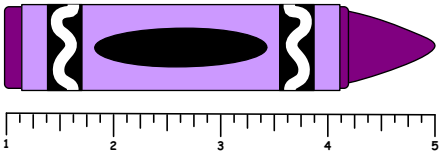
When do you use measurement?	How do you decide which unit to use?
How do you measure length?	How do you find the area of an object?
How do you read a clock?	How do you use measurement to solve problems?
How do you measure temperature?	What is the perimeter of the square below? 

Objective Four

About how many centimeters long is the object below?



About how many inches long is the object below?



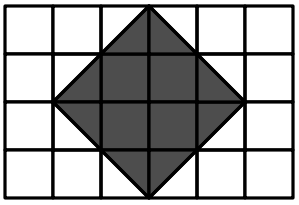
What is the first thing you should check when measuring with a thermometer?

What unit would you use to measure the length of a candy bar?

- ⬭ centimeters
- ⬭ meters
- ⬭ grams
- ⬭ feet

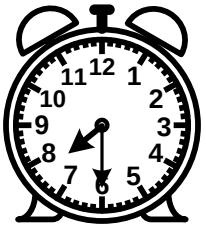
What time does the clock show?

What is the area of the shaded part below?



What time was it 30 minutes ago?

What time will it be in 45 minutes?

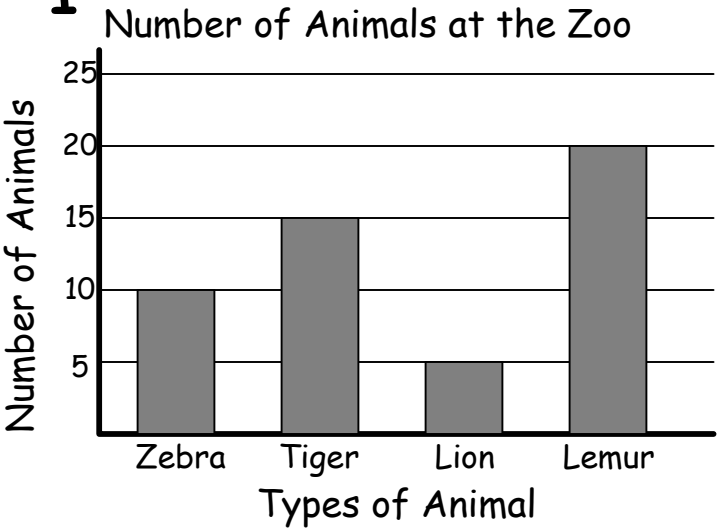


Objective Five

How can you organize data?	How can a graph be used to represent data?
How can data be used?	How do you know the probability of something happening?
How do you know if something will certainly happen?	How do you know if it is impossible for something to happen?
Use chart 1. How many more lemurs than tigers are in the zoo?	Use chart 1. How many animals are in the zoo altogether?

Shades of Math Charts

1



2

The Number of Students Who Play Sports

Sport	Number of Students
basketball	● ● ●
soccer	● ● ● ●
football	● ●
volleyball	●
hockey	●

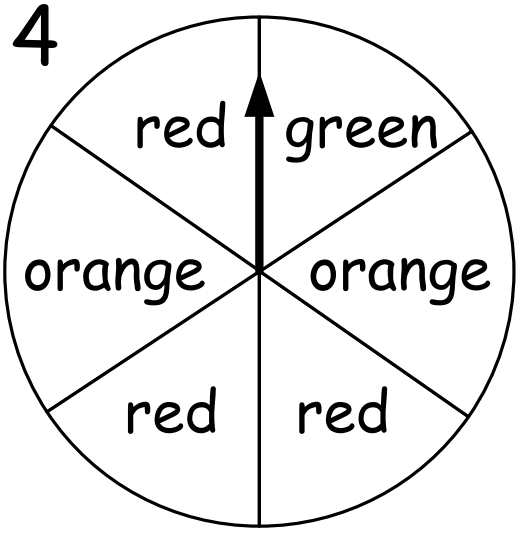
Each ● = 4 students

3

Candies in a Bag

Flavor	Number of Candies
Chocolate	8
Vanilla	3
Strawberry	1
Grape	6

4



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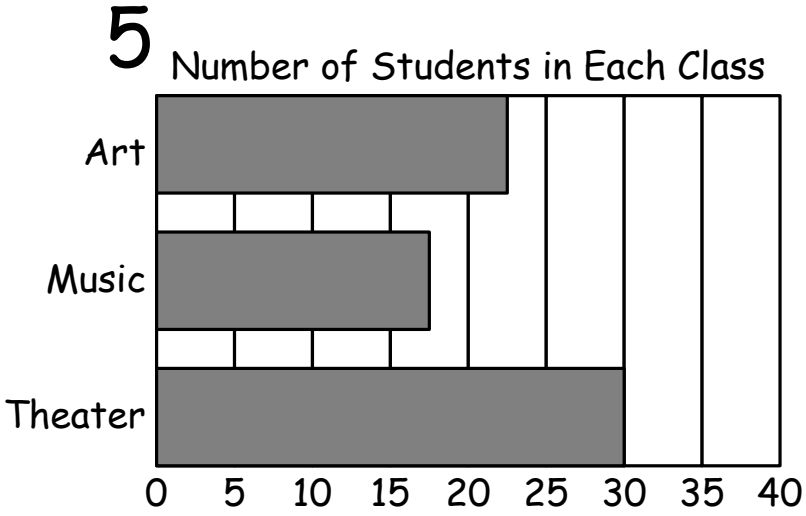

Objective Five

Use chart 2. How many students play soccer or football?	Use chart 2. How many more students play basketball than hockey?
Use chart 3. If you reach in and get one candy without looking, which one are you least likely to get?	Use chart 3. If you reach in and get one candy without looking, which one are you most likely to get?
Use chart 4. If you spin the spinner which color is it most likely to land on?	Use chart 4. If you spin the spinner which color is it least likely to land on?
Use chart 5. How many students are in each class?	Use chart 5. How many more students are in theater than music?

Objective Six

What is problem solving?	How do you know if an answer is reasonable?
What is a problem solving strategy?	How do you change words into math language and symbols?
What is logical reasoning?	Name two problem solving strategies.
Name two problem solving strategies.	Why should you ask yourself if your answer is reasonable?

Objective Six

Robert plays the trumpet in the school band. Two other students play trumpet. There are twice as many clarinet players as trumpet players. How can you find the number of clarinet players?	Carol is putting books on a bookcase. There are 7 shelves and each shelf can hold 8 books. She has already put 43 books on the shelves. How many more books can Carol put on the bookcase?
Frank has 18 pets. He has 4 dogs, 3 cats, 1 bird, and 2 hamsters. The rest of his pets are fish. How can you find out how many fish Frank has?	Look at this list of numbers. 4, 8, 12, 16, 20, 24, 28 Name a true statement about the numbers.
Spots the dog eats 3 to 5 scoops of dog food every day. What is a reasonable number of scoops of food Spots will eat in 5 weeks?	Each box of crayons has 8 crayons in it. How many crayons are in 4 boxes? 6 boxes? 8 boxes?
Rachel has 12 pets. Three of them are cats. What information is needed to know how many dogs Rachel has?	One marker costs $.75. A pack of 8 markers costs $4.25. Does it cost less to buy eight markers separately or the pack of eight markers?