

Mrs. Gerbino
Co-Op Tips

General Test Taking Skills

1. Pacing- Hard questions are worth the same as easy questions. Do not waste time working on really hard questions. Circle and skip it. Go back if there is time.
2. Make sure to work carefully. Right is more important than fast. Rushing can lead to careless errors.
3. Look out for words that indicate a change in direction. Words like NOT, all true except the following, antonym, means the opposite as.
4. GUESS if you do not have time to try. They only count the number correct.
5. Master the process of elimination. If you can eliminate even one answer you improve your odds of guessing correctly.
6. Ballpark- $\frac{4}{9}$ is a little less than $\frac{1}{2}$, $\frac{7}{11}$ is a little more than one half, so $\frac{7}{11}$ is larger than $\frac{4}{9}$. Think, does my answer look reasonable, does it make sense? $.5 \times 212$, half of two hundred is 100, my answer has to be around 100. 10.6 does not make sense, 106 does.
7. PLUG IN - if there is a variable in the answer, plug in a reasonable number. Try numbers that make the math easy like 2, 3, 5, or 10. This becomes your target answer. Go through each of the answer choices plugging in your number for the variable. Choose the answer choice that gives you a true statement.
8. PLUG IN THE ANSWER- Remember, they give you four answers- plug them in and see which one works.
9. Understand where they will try to FOOL you and don't fall for their tricks. Watch decimal places. If the answer is .05. you can expect to find .5, .005, or 5 as answer choices. Make sure you answer the question being asked. If it is how many left, the most common error, (like how many in all) will likely be in the answer choice. – you get the idea.

Sequence/Pattern/Analogy

1. Look for a pattern. If going up then multiplication or addition
2. If going down then division or subtraction
3. Look for change in direction. Is the next figure is it going in the same direction, opposite direction, or rotating.
4. How many parts of a figure are shaded?
5. Substitute numbers for letters.
6. Change pictures to words. Use words to find a similar picture. Use YOUR sentence to find the answer. For example: A dog lives in a dog house, A car lives in a garage. Make sure your answer is in the same order as the question.

Reading and Vocabulary

1. Find the MAIN IDEA of each paragraph. Write one or two words that sums up the main idea. This should be very quick, do not over think it. Write on side of paragraph.
2. Find the MAIN IDEA of passage. Again in your own words and do not over think it. Quick.
3. Underline important details.
4. Cover the answer choices with your hand. Answer in YOUR own words. Find the answer choice that matches your own words.
5. For words in context- again cover answer choice and answer in your own words. Find the choice that matches your words.
6. Watch for means the opposite or all true except. Use a two step process to solve these. First put the find a meaning for the given word in your own words. Then find the opposite for that word, in your own words. And finally, find a word that means the same as your opposite. For example: Find the word that means the opposite of aggressive. My own words- aggressive means "forceful" - an opposite of forceful could be calm without a fight. In the answer choice look for synonym. SUBMISSIVE or PASSIVE.

Mystery Language

1. Find two words that have common parts.
2. See what English word they have in common. This is what the word must mean.
3. Use the process of elimination to narrow down choices.

Sentence Structure/Correction

1. Only the underline part can be corrected. If it is not underlined you may not change it.
2. Watch for agreement. Subject/verb, tense, punctuation.
3. Watch what is being described
4. Choose active voice over passive voice.
5. Choose shorter over longer.
6. Be suspicious of; or:
7. Sentence structure should be parallel in form.

MATH

1. Use a chart or graphic organizer to help you organize and sort information

Ex 1: Rate x Time = Distance
 60mph 2hr = 120 miles

Ex 2. Bob is two years older than Mary. John one half the sum of Bob and Mary's age.

Bob	Mary	John
M + 2	M	(Mary + Mary + 2)/2

2. Ratio – A ratio is a part to part relationship.
 In a class of 35 members, there is a 2 to 3 ratio of boys to girls. What is the number of boys, of girls? You find equivalent ratio in the same way you find equivalent fractions.

Boys = $\frac{2}{3}$
 Girls

A ratio box will help you set up the information.

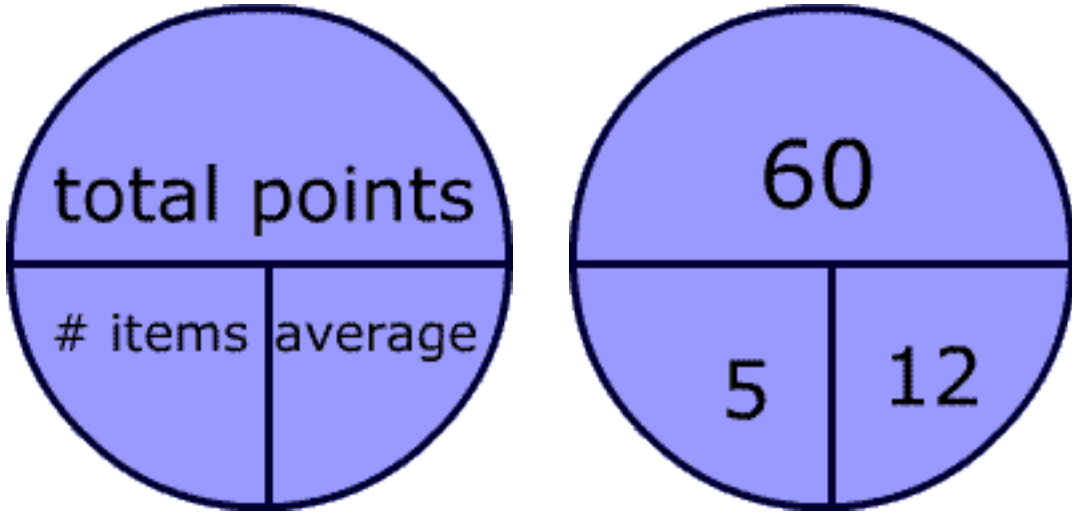
	Ratio		Box
	Boys	Girls	Total
Ratio	2	3	5
Multiply by (x)	7	7	7
Actual Number	14	21	35

3. Probability = $\frac{\text{Number of outcomes fulfilling the requirement}}{\text{Total number of possible outcomes}}$
4. MEAN/AVERAGE - The mean average is the sum of all the values divided by the number of values.

SUM OF THE VALUES =

NUMBER OF VALUES X MEAN

If you know any two you can figure out the third



For example: The mean of the following set of numbers is 12. Find x given the following numbers. x . Since there are 5 values including x and the mean is 12, 5 times 12 is 60, so the sum of the values must add up to 60. Add $11+16+17+2 = 46$
 $60-46 = 14$, x must equal 14.

5. PERCENTAGE- means out of a 100. The easiest two ways to approach percent problems are TRANSLATION and POSITION methods. The trick is to know when to use which method.

Translation: just translate words to math to form a numerical equation

_____ is 15% of 200

the word IS means (=), the word OF means (multiplication), so $X = (.15) 200$
 multiply and solve, $X = 30$, 30 is 15% of 200.

Position/Equivalent Ratio Method:

$$\frac{X}{200} = \frac{(p)}{100} \quad \text{Cross multiply and solve for } x \quad (200)(15) = 100X, X = 30$$

(of)

HELPFUL HINTS:

Percent is ALWAYS over 100.

The number after the word OF goes on the bottom (denominator).

Percentage	Translation	Chart
Percent	Divide by	100
Of	Means	times
What	Means	Variable (x)
Is, are. Equal	Means	=

6. Percent of Change- the trick to getting this right is making sure you understand what value is the “original amount”

$$\text{Percent of Change} = \frac{\text{Amount of change}}{\text{Original amount}}$$

Ex: If a new phone which cost \$155 went on sale for \$130, by what percent did the cost decrease? $(155-130)/155$ or $25/155 = .1612$ or 16.12 % decrease.

However, if the phone is no longer on sale and the price goes back to \$155- by what percent did the price change?

$(155-130)/130$ or $25/130 = .1923$ or 19.23% increase. NOTICE that the Original Amount is NOT the same. Which is why it is not the same % of change!

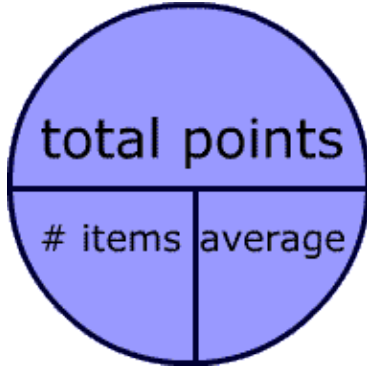
7. Work Problems- set up in fractional parts. If John paints a house in 3 hours and Mary paints a house in 6. How long will it take them together.

$$\frac{1}{3} + \frac{1}{6} = \frac{1}{X}, \text{ find a common demoninator, add and solve for x. } \frac{3}{6} = \frac{1}{x},$$

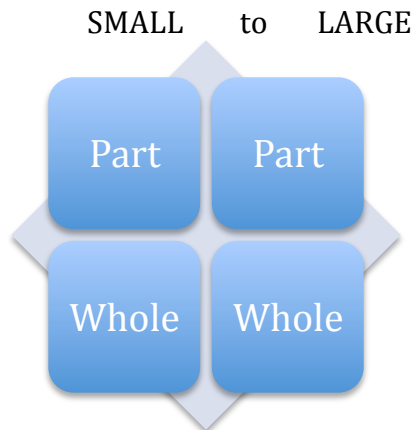
Multiply each side by the LCM, 6x, $(6x)(3/6)=(6X)(1/X)$, $3x=6$, $x=2$, so together they can paint the house in 2hrs.

Charts: XI. A FEW HELPFUL GRAPHIC ORGANIZERS

1. MEAN PIE: To find the mean average, divide the sum of the values by the number of values.



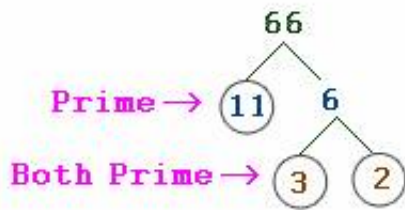
2. RATIO/FRACTION BOX



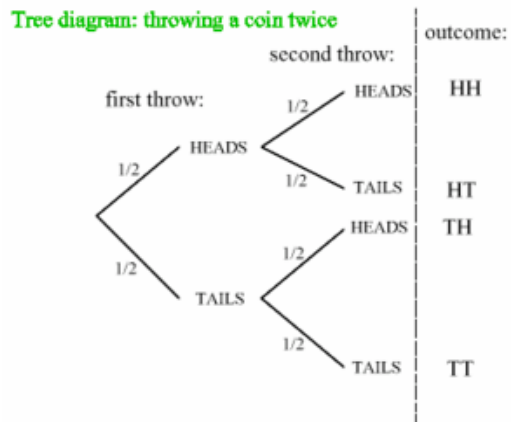
1. Charts- There are several different charts you can use to help you organize information; Break up a problem into its parts;

	Rate X	Time =	Distance
Car 1	50 mph	3 hours	150 miles
Car 2	60 mph	4 hours	?

2. Factor Tree- a tool to find the prime factors of a number.



3. Tree Diagram



XII. A FEW MATH “MANTRAS”

1. REMEMBER to keep value the same, What ever I do to the top, I do to the bottom, whatever I do to the right, I do to the left.
2. The best way to eat an elephant is one bite at a time. A complex problem can be broken a part into smaller, bite size pieces.
3. In algebraic operations, ISOLATE the variable.
4. PEMDAS- order of operations- USE IT!

Some things you just have to memorize:

Rate x Time = Distance

Simple interest = Principle x Rate x Time

Perimeter: Means to add up the sides. The distance around a shape.

Circumference: is the distance around a circle. Remember "D" for distance a memory trick: Circumference= $d\pi$ or diameter times pi. If you have the radius, you can multiple it by 2 to find the diameter.

Area: Rectangle = length x width

Square = side squared, $s \times s$

Triangle = $1/2bh$, or one half times the height times the base

Circle = πr^2 radius squared times pi

Volume: length x width x height

Surface area: Add up the area of all the faces

Angles

Inside angles (interior angles) of a

Triangle: add up to 180

Square: add up to 360

Circle: add up to 360

Polygon: (Number of sides - 2) x 180

Acute: less than 90

Obtuse: more than 90

Right: 90

Straight (line): 180

Pythagorean Theorem: (Only for Right Triangles) $a^2 + b^2 = c^2$

Prime numbers- 2 is the first prime number. (2,3,5,7, etc.)

Positive integers include: 1,2,3,4,5,

Positive even integers include: 2, 4, 6 etc.

Positive odd integers include: 1, 3, 5, etc. to find the next negative integer, $1 + 2 = 3$, $3 + 2 = 5$, so $x+2 =$ next negative integer.