

SAT Intensive Workshop - Day 4

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Updated slogan list!

1. Math: FEWER CALCULATIONS MEANS FEWER STUPID MISTAKES.
2. Writing: BE AS CONCISE AS POSSIBLE IN AS FEW WORDS AS POSSIBLE.
3. Grammar: GOOD MODIFIES A PERSON, PLACE, OR THING; WELL MODIFIES AN ACTION OR A PERSON'S HEALTH.

1 Today's Events

- Vocabulary quiz and games.
- Math section 3 practice exam.
- Review of Math section 4 from 12 June.
- Review of Reading section 1 from 12 June.
- Lunch.
- Review of Writing section 2 from 12 June.
- Writing section 2 practice exam.
- Reading section 1 practice exam - did as group.
- Punctuation lecture.
- Practice Essay.

1.1 Vocabulary

Often, people misuse good and well. I've heard you guys misuse it, too. At a basic level, you just need to know which word is which part of speech.

- Good. Good is always either an adjective or a noun. For example, if someone volunteers a lot, we would say, "*She is doing good.*" Why? Good is a noun, and is receiving the action of "doing". Another example, with good as an adjective: if you're happy and have had a wonderful day, we would say "*At last, life is good.*". This is because good is modifying life, a noun, so good is an adjective. We wouldn't say "life is well" because well would be modifying is, which simply doesn't make sense.
- Well. Well is almost always an adverb, so it modifies a verb. For example, if someone is having a good day, we would say "*He is doing well.*". Well is describing doing – it's letting you know that you're quite literally doing well.

So, the slogan is GOOD MODIFIES A PERSON, PLACE, OR THING; WELL MODIFIES AN ACTION. However, there is one exception to this slogan. When referring to a person's health, we *always* use well, even if that means using it as an adjective. For example, “*After his surgery, Bob was well*”. For whatever reason, when referring to a person's health, we use well, not good. Just think back on your own personal experience. When you're telling someone to recover from an illness, you say “*get well*”, not “*get good*”. I hate it too. So, we should adjust our slogan to read, GOOD MODIFIES A PERSON, PLACE, OR THING; WELL MODIFIES AN ACTION OR A PERSON'S HEALTH.

1.2 Review of Math section 4 from 12 June.

1.2.1 Statistics

Be sure you are completely familiar with the following statistics terms, as well as those in the Day 1 notes and line of best fit.

Definition 4.1. Given a set of data, the *mean* of the data is the average. So, given $\{x_1, x_2, x_3, \dots, x_n\}$, the mean of this set of data is

$$\bar{x} = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}.$$

Definition 4.2. Given a set of data, the *median* of the data is the middle point. So, consider a set of data $\{x_1, x_2, x_3, \dots, x_{2n-1}\}$, so that there's an odd number of data points. Then, the median is

$$\text{median} = x_n.$$

Now consider a set of data that has an even number of data points, $\{x_1, x_2, x_3, \dots, x_{2n}\}$. Then, the median is

$$\text{median} = \frac{x_n + x_{n+1}}{2}.$$

Definition 4.3. Given a set of data, the value (or values) that appears most often is called the *mode*.

Definition 4.4. Given a set of data, the *range* of the set is the largest element minus the smallest element.

1.2.2 Conic sections and distance formula

Definition 4.5. In the xy -plane, given a parabola with vertex (h, k) and scaling factor a , the standard equation for that parabola is

$$y = a(x - h)^2 + k.$$

Definition 4.6. In the xy -plane, given a circle with center (h, k) and radius r , the standard equation for that circle is

$$(x - h)^2 + (y - k)^2 = r^2.$$

Theorem 4.7. In the xy -plane, given two points with coordinates (x, y) and (x', y') , the distance between the two points is given by the formula

$$\text{distance} = \sqrt{(x' - x)^2 + (y' - y)^2}.$$

I just have a few comments regarding conic sections. First of all, I don't think ellipses and hyperbolas are on the SAT, so you don't need to worry about them. Also, beware of signs (by sign, I mean $+$ and $-$) when working with standard equations for conic sections. For example, if you're given that the standard equation for a circle is $(x - 4)^2 + (y + 2)^2 = 16$, you can't just read off the constants. You also have to be aware of the *sign* in front of the constant. Furthermore, you can't just read off the sign – you have to flip it, too. Don't go so quickly that you forget to keep track of the signs.

1.2.3 More on polynomials

Regarding polynomials, it's useful to remember this fact.

Theorem 4.8. Given a polynomial, r is a root of the polynomial if and only if $(x - r)$ is a factor of the polynomial.

From [Theorem 4.8](#), we can also infer the following. Call the polynomial $p(x)$. If $p(r) = n$ for some number n , then dividing p by $(x - r)$ leaves a remainder of n .

1.3 Review of Reading section 1 from 12 June.

Again, just be sure to read the passages properly and try to find concrete evidence for every answer.

1.3.1 New words

- bely (v) - to disguise or contradict.
- judicious (adj) - showing or done with good judgement.
- thwart (v) - prevent from accomplishing.
- vice (n) - a bad habit; the opposite of a virtue.
- vivacious (adj) - lively and animated.
- prattle (v) - talk for a long time, generally in a foolish way.
- doctrine (n) - a set of beliefs taught by an entity, usually a church or political party.
- idolatrous (adj) - treating something as an idol
- cant (n) - hypocritical talk, generally political or religious in nature.
- sanctimonious (adj) - making a show of being superior, generally derogatory.
- humbug (n) - false talk or behavior.
- conscientious (adj) - wishing to do what is right; diligent; industrious.
- solicitude (n) - care or concern for something.
- precocious (adj) - having developed abilities and talents beyond one's age, usually used to refer to a child.
- vitality (n) - being bubbly; full of energy.
- credulous (adj) - believing things too easily; gullible.
- fallacious (adj) - false or based on a false belief.
- proliferate (v) - spread out; multiply.
- cloistered (adj) - enclosed, sheltered. Usually modifies some sort of space.
- sequestered (adj) - isolated and hidden away. Not used for people, but rather for places.

1.4 Review of Writing section 2 from 12 June.

We did this one in a group, so you guys already addressed most of the issues amongst yourselves.

1.4.1 New words

- garner (v) - gather; collect.
- obfuscate (v) - make unclear, obscure.
- evince (v) - reveal a feeling.

2 Homework

Make sure you know all of the words in the “New words” sections, their definitions, parts of speech, and how to use them in a sentence. Also, review the punctuation presentation that we covered today in class. This can be found on the website under Outside-Materials > all-punctuation-powerpoint.pdf.

Due by Monday, 17 June at the beginning of class: complete the punctuation worksheet, which can be found on the website under Outside-Materials > punctuationworksheet.pdf.