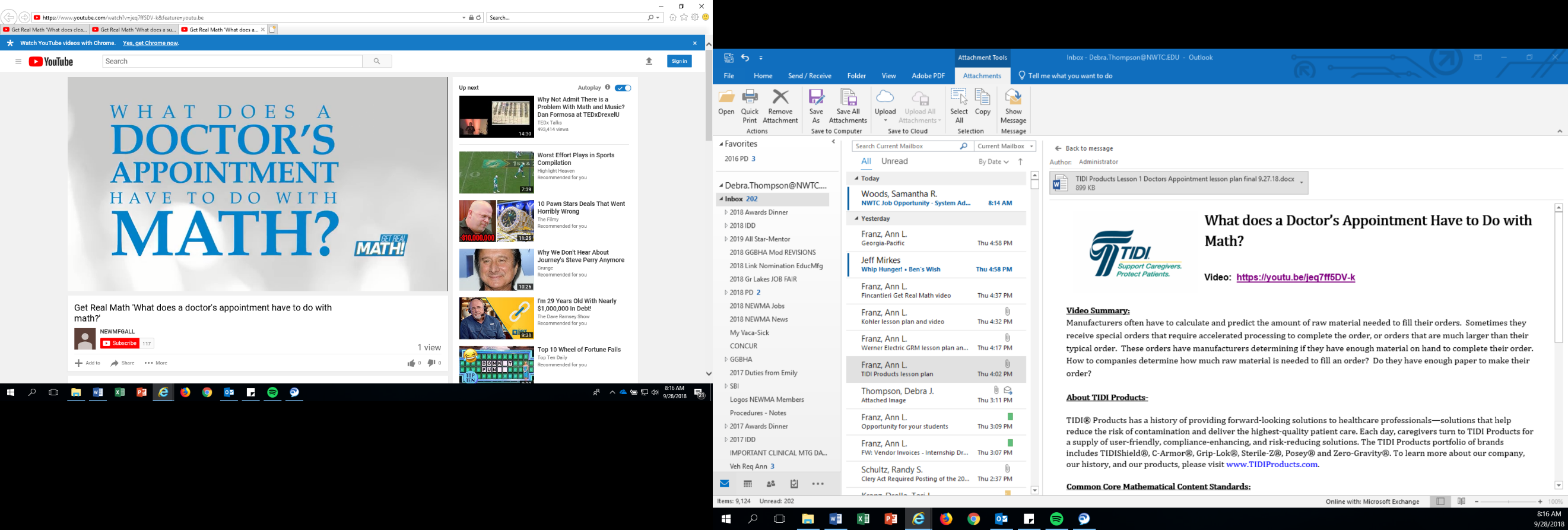
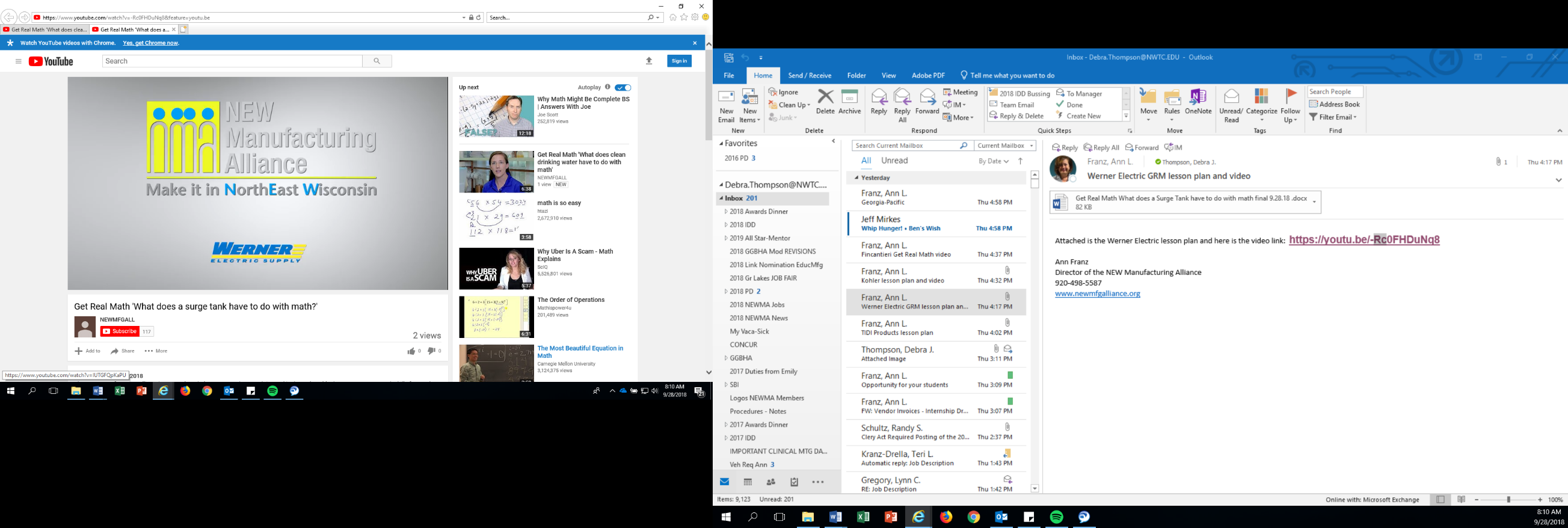
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**What does a Doctor’s Appointment Have to Do with Math?**

**Video:** [**https://youtu.be/jeq7ff5DV-k**](https://youtu.be/jeq7ff5DV-k)

**Video Summary:**

Manufacturers often have to calculate and predict the amount of raw material needed to fill their orders. Sometimes they receive special orders that require accelerated processing to complete the order, or orders that are much larger than their typical order. These orders have manufacturers determining if they have enough material on hand to complete their order. How to companies determine how much raw material is needed to fill an order? Do they have enough paper to make their order?

**About TIDI Products-**

TIDI® Products has a history of providing forward-looking solutions to healthcare professionals—solutions that help reduce the risk of contamination and deliver the highest-quality patient care. Each day, caregivers turn to TIDI Products for a supply of user-friendly, compliance-enhancing, and risk-reducing solutions. The TIDI Products portfolio of brands includes TIDIShield®, C-Armor®, Grip-Lok®, Sterile-Z®, Posey® and Zero-Gravity®. To learn more about our company, our history, and our products, please visit www.TIDIProducts.com.

**Common Core Mathematical Content Standards:**

**5.NBT.b7:** Add, subtract, multiply, and divide decimals to hundredths

**6.NS.3:** Fluently add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.

**6.NS.2:** Fluently divide multi-digit numbers using the standard algorithm.

**7.EE.4a:** Use variables to represent quantities in a real-world or mathematical problem and construct simple equations and inequalities to solve problems by reasoning about the quantities. Solve word problems leading to equations of the form px+q=r, where p q, and r, are specific rational numbers.

**Common Core Mathematical Practice Standards:**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.

**Teacher note:** *Please preview the entire video and pre-work solutions in order to anticipate students’ needs, misconceptions and materials unique to your classroom.*

The student work page at the end of the lesson will give students a place to jot down ideas and work through answers as they are following along with the video.

**Pre-Activity Discussion**

Question to ask students: When you go to the doctor, how does the paper covering the exam table get made? How much paper do you think is used in an exam room in a day? A week? How much table paper do you think the entire clinic uses in a day? A week? A year?

Discussion: Manufacturing companies like TIDI Products are faced with determining the amount of raw product needed to fill orders. They utilize the information they know about the raw paper to determine what amount is needed to fulfil the order. What information would be helpful to determine how much raw paper product they need?

**Part 1**

* Play Video (0:00-0:58), pause at (0:58) to answer the discussion questions.
* Nick is trying to decide if he has enough raw material paper to complete the order for 500 cases of table paper. He first needs to determine how many rolls of table paper he needs to fulfill an order for 500 cases of table paper if there are 12 rolls of table paper in a case, and he needs 500 cases, how many rolls of table paper does Nick need?
* Have students work through this problem. Have students share how they arrived at their answer with a peer and then have several students explain how they calculated their answer. Encourage students to ask, “I wonder…” and “I noticed….” Questions of the reasoning of their peers. Discuss methods and answers as necessary.
* Answers:

500 cases of table paper x 12 rolls per case = 6,000 rolls of table paper are needed to complete the order.

**Part 2**

* Play Video (1:00 – 1:40), pause at (1:40) to answer the discussion questions.
* Now that the employees know how many rolls of table paper is needed to complete the order, they now need to determine how much weight in raw material is needed to complete the order. If 1 roll of table paper weighs 1.25 pounds, then Nick will need 1.25 pounds of tissue (Raw Material) to manufacture one roll of table paper, how much raw material is needed to complete the entire order for 6,000 rolls of table paper?
* Have students work through this problem. Have students share how they arrived at their answer with a peer and then have several students explain how they calculated their answer. Encourage students to ask, “I wonder…” and “I noticed….” Questions of the reasoning of their peers. Discuss methods and answers as necessary.
* Answers: 6,000 rolls needed x 1.25 pounds of raw material needed to make one pound = 7,500 pounds of tissue (raw material) needed to complete the order.

**Part 3**

* Play Video (1:40 – 2:24), pause at (2:25) to answer the discussion questions.
* To determine how many rolls of raw material is needed to complete the order, Nick and Jackie need to know how many pounds are in a roll of raw material. If one big roll of raw material weighs 2,140 pounds, then how many raw material rolls do they need to complete the order?
* Answers:

7,500 pounds of raw material tissue is needed ÷ 2,140 pounds per roll = 3.5 rolls of raw material tissue is needed to complete the order.

**Extension**

If Nick calculated he needed 3.5 rolls of raw material tissue to complete the order, why did he call over to have 4 rolls brought in to complete the order? When calculating how much is needed for an order, often real-world situations require you to always round up when you are not able to break a part of a whole to complete your order. Therefore, Nick needed 3.5 rolls to complete the order, but the rolls do not come in half rolls or quarter rolls, so he had to have 4 rolls brought in to complete the order.

If using this lesson with seventh or eighth graders, have them use algebraic equations to determine the amounts needed.

Student Work Page

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 1**

How many rolls of table paper does Nick need to complete the order of 500 cases?

**Part 2**

How much weight in raw material tissue is needed to complete the order of 500 cases of table paper?

**Part 3**

How many raw material tissue rolls does Nick need to complete the order?

**Extension**

Why did Nick say he needed to have 4 rolls of raw material tissue brought in to complete the order?