

Lesson Plan

Grade: 9th		Subject: Algebra 1	
Materials: Notes packet, worksheet		Technology Needed: None needed, I will need the projector to project the notes on the board to fill in with the students.	
Instructional Strategies: <input type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input type="checkbox"/> Guided practice <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> PBL <input type="checkbox"/> Learning Centers <input type="checkbox"/> Discussion/Debate <input type="checkbox"/> Lecture <input type="checkbox"/> Modeling <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) 6.RP.3a Find a percent of a quantity as a rate per 100. Solve problems involving finding the whole, given a part and the percent		Differentiation Below Proficiency: The students who are below proficiency will only have one worksheet that they will be assigned. They also will receive a little more help when doing the worksheet to get them to proficiency. Above Proficiency: The students who are above proficiency will have another worksheet to do if they get through the first worksheet as time allows. They also will help the students who are below proficiency if they need help. Approaching/Emerging Proficiency: The students who are approaching proficiency can ask the students who are above proficiency for help and if they still have questions they can ask me for help. Modalities/Learning Preferences: Existential, Verbal/Linguistic, Visual/Spatial, Bodily/Kinesthetic, & Interpersonal	
Objective(s) The students will, by the end of the lesson, use percentages to solve problems and find parts of the proportion to find the percentage. Bloom's Taxonomy Cognitive Level: Apply			
Classroom Management- (grouping(s), movement/transitions, etc.) The students have assigned seats. The seating is arranged in such a way that limits the amount of distractions for each student so that they can learn to the best of their ability. The students also know where the calculators are in the classroom so that when they need them they can quietly walk over and get one.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students will know the classroom procedures and will know to come into class and sit down and wait till everyone is in class and then we will start. The students will also know that they must respect me and the other students at all times.	
Minutes	Procedures		
0	Set-up/Prep: The students will have the notes packet and I will have the worksheets printed so that when we get done with the lesson I can hand them out right away and the students can start working on them right away.		
3-5	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) Does anybody know what a percentage is? Where have you seen percentages before? A percentage is a ratio that had 100 as the denominator. Another way to think of it is percentage means out of 100.		
20-25	Explain: (concepts, procedures, vocabulary, etc.) <ol style="list-style-type: none"> When solving problems with percentages we can think of the problem as a proportion. The proportion is $\frac{is}{of} = \frac{\%}{100}$. When we are given a problem it will usually have two of the three parts of the proportion, it will have either the "is" and "of", the "is" and %, or the "of" and %. Once we read the problem and figure out which parts are given to us we can set up the proportion and solve it. For our first example we have "What percent of 42 is 28?" So we have the "is" and the "of" so putting that into the proportion we have $\frac{28}{42} = \frac{x}{100}$. We then cross multiply and we get $2800 = 42x$, then we divide by 42 and we get $x = 66.67\%$ 		

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	<p>5. For example 2 we have "What percent of 48 is 18?" We again have the "is" and "of" so the proportion is $\frac{18}{48} = \frac{x}{100}$ again we cross multiply and we get $1800 = 48x$, then we divide by 48 and we get $x = 37.5\%$</p> <p>6. For example 3 we have "What is 75% of 180?" This time we have the & and the "of", so we set it up as $\frac{n}{180} = \frac{75}{100}$. Now we cross multiply and we get $100n = 13500$, nest we divide by 100 and we get $n = 135$</p> <p>7. For example 4 we have "What is 40% of 720?" We have the "of" and % so we again have $\frac{n}{720} = \frac{40}{100}$. We cross multiply and get $100n = 28800$, then we divide by 100 and get $n = 288$.</p> <p>8. For example 5 we have "55% of what number is 231?" This time we have the "is" and the % so we set it up like this $\frac{231}{x} = \frac{55}{100}$. Next we cross multiply and get $23100 = 55x$, then we divide by 55 and we get $x = 420$.</p> <p>9. For example 6 we have "165% of what number is 132?" We again have the "is" and the % so we have $\frac{132}{x} = \frac{165}{100}$. We cross multiply and get $13200 = 165x$, we then divide by 165 and we get $x = 80$.</p>
20	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>I will now hand out the worksheet that they will work on for the rest of class and if they do not get it done they will have it for homework and the next day we will go over any questions that they have on it. During class the students will be encouraged to work in small groups, but if they want to work alone they are welcome to.</p>
2-3	<p>Review (wrap up and transition to next activity):</p> <p>If the students finish their worksheet before class is over they will hold on to them until the day of the test. If they do not get it done by the end of class they will do it for homework and need it done by the test. We will go over the homework the next day to see if there are any questions.</p>
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc.</p> <p>During the time for working on their own I will walk around the room and asking the students questions to make sure they are on the right track of learning. Two days after the lesson is taught the students will have an exit ticket that they will have to complete on comprehension of the topic that was taught.</p> <p>Consideration for Back-up Plan:</p>	<p>Summative Assessment (linked back to objectives) End of lesson: The students will have a homework worksheet that they will have to do that will be graded at the end of the lesson.</p> <p>If applicable- overall unit, chapter, concept, etc.:</p> <p>At the end of the chapter the students will get a test that will be graded and recorded.</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p>	