Paper details:

INTRODUCTION To complete this task, you will contemplate the progression of student knowledge related to ratios and proportional reasoning across three grade levels. You will watch the video “Introduction to Ratios & Proportional Relationships,” then analyze and evaluate the lesson. Potential modifications will also be considered. Using the knowledge gained about the standards and effective instructional strategies, you will develop an original lesson plan related to understanding and teaching ratios and proportional reasoning that incorporates a chosen instructional strategy. Note: Instructional strategies are teaching strategies, such as formative assessments and small group instruction, that can be used in lesson plans on many different topics. REQUIREMENTS Your submission must be your original work. No more than a combined total of 30% of a submission can be directly quoted or closely paraphrased from sources, even if cited correctly. Use the report provided when submitting your task as a guide. You must use the rubric to direct the creation of your submission because it provides detailed criteria that will be used to evaluate your work. Each requirement below may be evaluated by more than one rubric aspect. The rubric aspect titles may contain hyperlinks to relevant portions of the course. Note: The original lesson plan in part D must be submitted as a separate document from parts A–C and must have its own originality report. A. Study the ratio and proportional reasoning content standards for your state and do the following: 1. List three content standards from your state that apply to ratios and proportional reasoning for grades K–6. The three selected standards must represent three different grade levels. 2. Write a sample problem for each of the three standards to illustrate the evolution of student understanding. 3. Provide a solution for each problem that demonstrates each step or explains the thinking process involved in determining the solution. 4. Discuss how the chosen standards and problems build student understanding of ratios and proportional reasoning across the three K–6 grade levels selected previously. B. Watch the “Introduction to Ratios & Proportional Relationships” video and do the following: 1. Describe one example from the video that demonstrates how concrete representations are used to model the concept of ratios and proportional relationships. a. Explain why the use of concrete representations is an effective instructional strategy. 2. Explain how the teacher effectively integrates cooperative learning into the lesson using specific examples from the video. a. Describe the role of the teacher and the students in this lesson using specific examples from the video. 3. Explain how the teacher identifies student misconceptions and redirects student thinking using specific details from the video. 4. Explain how the lesson activities and related student conclusions could be used to further extend student thinking. C. Prepare to create an original lesson plan on ratios and proportional reasoning by doing the following: 1. Describe an evidence-based instructional strategy that will be incorporated into your original lesson plan. a. Explain why the chosen instructional strategy would be beneficial in a lesson on ratios and proportional reasoning using evidence from a credible source to support your selection. D. Using the attached “Direct Instruction Lesson Plan Template,” design an original lesson plan for elementary mathematics that addresses the topic of ratios and proportional reasoning. Submit the lesson plan as a separate document from parts A–C. Note: The lesson plan should be detailed, complete, descriptive, and reflective. As a general rule, include enough detail so that a non-mathematics substitute teacher could teach the lesson using your plan. 1. In the “Instructional Strategies and Learning Tasks” section of the lesson plan template, identify the instructional strategy that was selected in part C1 and explain how it was incorporated into the lesson. E. Acknowledge sources, using in-text citations and references, for content that is quoted, paraphrased, or summarized. F. Demonstrate professional communication in the content and presentation of your submission.