

Scenario 1: Evaluating Instructional Resources

Part 1

The sixth grade teachers want to use the Order of Operations Puzzle as independent practice after teaching 6.7(A): *The student is expected to generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization.*

Name _____ Date _____

Order of Operation Puzzle

For every answer more than one equation is correct.
Find equations.

$5 \times 5 + 1 - 14 \div 2 =$	19
$4 \div 2 \times 8 + 3 =$	
$5 + 7 \times 2 - 1 \times 2 =$	
$7 \times 3 + 8 \times 1 - 0 =$	

$7 + 7 \times 2 + 4 =$	25
$25 - 12 - 12 + 4 =$	
$8 \times 2 + 9 \div 3 - 2 =$	
$5 \times 5 \times 5 \div 5 =$	

$18 + 14 - 18 + 2 =$	14
$4 + 2 \times 2 + 2 =$	
$6 \times 2 - 10 + 12 =$	
$4 \times 4 - 4 + 2 =$	

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- Identify the instructional strengths and weaknesses of this activity as it relates to the standard
- Using the **Mathematical Proficiency Planning Template**, modify the activity with strategies that address each strand of proficiency.

Part 2

How will you explain your reasoning when discussing your observations with your colleagues?

What additional questions might you have for the sixth grade team?

Scenario 2:

Aligning Curriculum, Instruction, and Assessment

Part 1

You, as well as your team of seventh grade teachers, are feeling overwhelmed by the implementation of the new mathematics TEKS. With almost 50% of the content being new to the grade level, you often feel as if you don't know how to begin the process of instructional planning.

During the next planning meeting, the team plans to incorporate the Financial Literacy standards into their study of “Representing and Solving Problems Involving Proportional Relationships”. These student expectations will be the focus of the unit:

- 7.4(A) represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$;
- 7.4(B) calculate unit rates from rates in mathematical and real-world problems;
- 7.4(C) determine the constant of proportionality ($k = y/x$) within mathematical and real-world problems;
- 7.4(D) solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems; and
- 7.4(E) convert between measurement systems, including the use of proportions and the use of unit rates.

- 7.13(A) calculate the sales tax for a given purchase and calculate income tax for earned wages;
- 7.13(B) identify the components of a personal budget, including income; planned savings for college, retirement, and emergencies; taxes; and fixed and variable expenses, and calculate what percentage each category comprises of the total budget;
- 7.13(C) create and organize a financial assets and liabilities record and construct a net worth statement;
- 7.13(D) use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student's city or another large city nearby;
- 7.13(E) calculate and compare simple interest and compound interest earnings; and
- 7.13(F) analyze and compare monetary incentives, including sales, rebates, and coupons.

- Use the **Mathematical Proficiency Planning Template** to assist teachers with developing a plan to incorporate the Financial Literacy standards into this unit while focusing on each strand of proficiency.

Part 2

How will you explain your reasoning when sharing your thoughts and ideas with the team?

Scenario 3: Effective Instructional Design

Part 1

After the first benchmark, the eighth grade teachers are concerned about their students' performance on these student expectations:

8.5(A) represent linear proportional situations with tables, graphs, and equations in the form of $y = kx$;

8.5(B) represent linear non-proportional situations with tables, graphs, and equations in the form of $y = mx + b$, where $b \neq 0$

The eighth grade teachers believe their students have too many gaps in their knowledge involving equations to master these algebraic concepts that are more abstract.

Using the **Mathematical Proficiency Planning Template**, develop a plan for the eighth grade team that will help them design an effective instructional plan addressing each strand of proficiency.

Part 2

How will you explain your reasoning when sharing your thoughts and ideas with the team?