Grade 8 MATHEMATICS

STUDENT EDITION | UNIT 1

One grade, one subject. Type answers in a compatible PDF viewer, save privately to your device or print blank and write by hand.

Student initials: _____ Date: _____

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STUDENT WORKBOOK - Unit 1

Mathematics only. No Language Arts, Science, History or Scripture assignments appear in this workbook.

Lesson 1: Functions, linear equations and systems

Learn the Concept

Teacher explanation: A linear function can be written y=mx+b, where m is slope and b the vertical intercept. The slope between (2,5) and (6,13) is (13-5)/(6-2)=2. Two linear equations form a system, and a solution satisfies both.

Guided Example

Read the example in the lesson explanation. Use a drawing, number line, manipulatives or written equation to explain each step to a parent or teacher.

Independent Practice: 10 Problems

1. Compute slope between (2,5) and (6,13).

2. Find y-intercept of y=3x-7.

3. Evaluate y=-2x+5 for x=-1.

4. Solve 5(x-2)=3x+8.

5. Solve y=x+2 and y=2x-1 simultaneously.

6. Write line equation with slope 4 and y-intercept 3.

7. Evaluate 2^3 x 2^4.

8. Write 0.00056 in scientific notation.

9. Find hypotenuse of right triangle with legs 5 and 12.

10. Advanced: prove a vertical line fails the vertical line test for y as a function of x.

Check Your Work

Show the steps for at least two problems and explain how you know your answer is reasonable. If you find an error, correct it and try a different example.

Advanced Scholar Extension

When these problems are easy, use the next grade’s mathematics unit or the Advanced Scholars pathway after showing mastery. Do not accelerate solely because of age.