

FOCUS AREAS FOR EIGHTH GRADE:

- ▶ Understand and use linear equations (like $100 + 40x$) to solve problems. For example, compare the costs of two phone plans, each with a one-time charge and a monthly fee.
- ▶ Understand and use functions: situations where one quantity depends on another, like when the distance a train travels depends on its speed.
- ▶ Explore and use the Pythagorean Theorem for right triangles ($A^2 + B^2 = C^2$). For example, find the height of a ladder leaning against a wall.
- ▶ Create linear equations to model real-life data. For example, graph the height of a plant based on the hours of sunlight it gets.



BY THE END OF EIGHTH GRADE, STUDENTS CAN:



- ▶ Explain the concept of irrational numbers (like π and $\sqrt{2}$).
- ▶ Use square and cube roots (like $\sqrt{16}$ and $\sqrt[3]{8}$).
- ▶ Explain how proportions and linear equations are related. For example, explain the slope of a line as a unit rate.
- ▶ Solve single and paired linear equations. For example, if $3x + 5 = 11$, then $x = 2$.
- ▶ Compare functions shown in different forms, like a table of values and a graph.
- ▶ Explain how angles inside and outside of a triangle are related.
- ▶ Explain how angles created by two parallel lines being cut by another line are related.
- ▶ Use formulas to solve real-world problems involving the volume of cylinders, cones, and spheres.
- ▶ Create a scatter plot of two related variables, like arm length and leg length.

QUESTIONS YOU CAN ASK YOUR CHILD:

- ▶ Which video game system will cost more in total if you use it for five years?
- ▶ How long is a straight line from home plate to second base on a baseball diamond?
- ▶ Will our plant grow faster if we increase the amount of water we give it each day?

TOPICS YOU CAN DISCUSS WITH YOUR CHILD'S TEACHER:

- ▶ Projects you can do at home to practice solving linear equations
- ▶ Your child's readiness for advanced math courses

