PROBLEM SOLVED
MAKING SENSE OF MATHEMATICS

Area of a Parallelogram
Video Script

Scene		Full Transcript
1	**Allie:**	Whoa, that's cool! Hey, guys; Allie here. As you can see, there's a lot going on at the new skate park. The community has really come together to get this project off the ground.
	Voice-Over Allie:	The boxes and ramps have been finished for a while, and today volunteers are laying sod around the parking lot. When I showed up, the organizers were scratching their heads trying to figure out how much sod they needed for a parallelogram-shaped area.
	Allie:	I explained that they just needed to calculate the area. Come along for the ride as we go to get the sod, and I will explain how we can get this *Problem Solved.*
2	**Allie:**	We're here at Olson Sod Company.
	Voice-Over Allie:	They grow acres and acres of grass that can be used to sod new lawns. You simply tell them the area you are trying to cover, and they load you up with enough rolls to do the job.
3	**Voice-Over Allie:**	Today, we are working with a parallelogram. A parallelogram is a quadrilateral in which both pairs of opposite sides are parallel. In order to calculate the area of a parallelogram, you need to know the base and the height. Any of the four sides of a parallelogram can be used as the base. The height of a parallelogram is the distance from the base to the opposite side. The height is always perpendicular to the base; that means the base and height form a right angle. The height can be measured anywhere along the baseline, even outside the parallelogram. The parallelogram can be in any position. It doesn't have to sit on its base. If this side is the base, then this is the height.
4	**Voice-Over Allie:**	Now, let's look at how to find the area of any parallelogram. We should start with something we know – how to find the area of a rectangle: length times width, or we can call these dimensions the base and the height. If you cut a parallelogram into two parts along the height, you can rearrange the pieces to form a rectangle with the same area. The rectangle and parallelogram have the same base and height, so we can find the area of this parallelogram by multiplying base times height. This procedure works for all parallelograms.
5	**Voice-Over**	The base of the parallelogram at the park is 60 feet and its height is 20 feet. Using the formula, the area of the parallelogram is 1200 square feet.

MakingSense

	Allie:	Here is one more key point to remember: the area of a parallelogram does not change even if you use another base and its corresponding height to do the calculations. Let's use this side as our base; it measures 30 feet, and the corresponding height is 40 feet. The area is 30 times 40, still 1200 square feet.
6	**Allie:**	They said each roll of sod covers 10 square feet, so we need 120 rolls to do the job. Let's head back to the skate park to see how they're doing.
7	**Allie:**	Well, the volunteers and the skaters seem pretty excited that the skate park is almost finished, and you should be too, now that you understand how to find the area of a parallelogram. I'm out of here; I gotta' roll. *Problem Solved.*