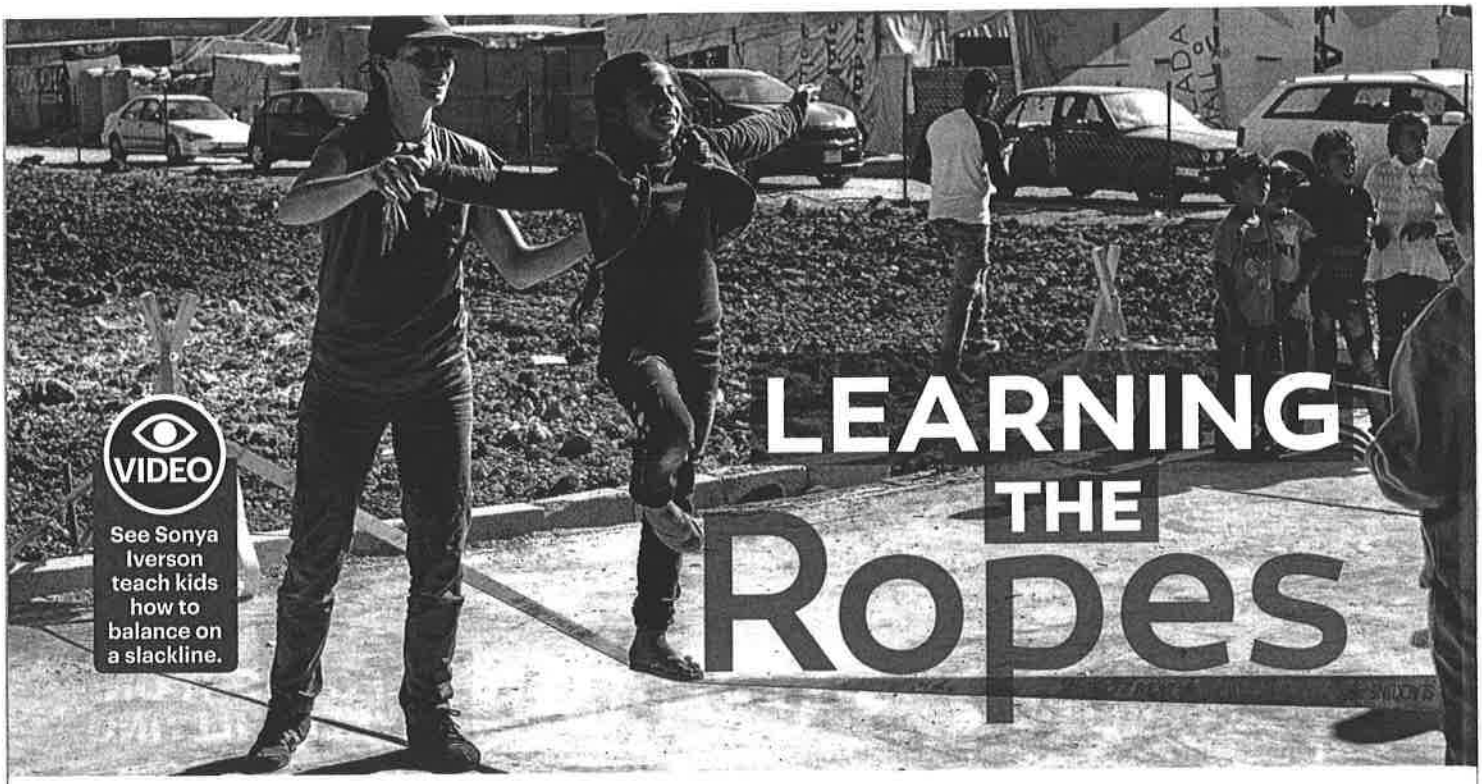


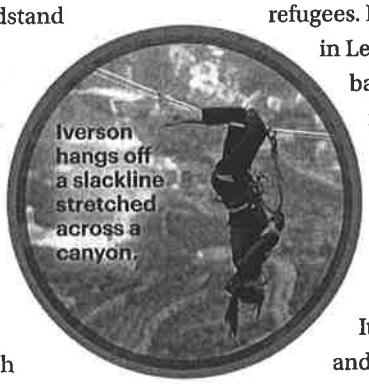
VIDEO

See Sonya Iverson teach kids how to balance on a slackline.

LEARNING THE Ropes

Sonya Iverson teaches Syrian refugees the sport of slacklining

Holding a handstand is hard. How much harder would it be to balance upside down on a rope? It may sound impossible, but people around the world are bouncing and balancing on slacklines. Slacklining is a sport much like tightrope walking. But instead of a wire, it uses a flat, stretchy rope that sags and swings.



Iverson hangs off a slackline stretched across a canyon.

Sonya Iverson fell in love with slacklining in 2008. She practiced and eventually worked up to highlining, a version of the sport where people (wearing safety ropes) cross canyons at terrifying heights. Iverson has slacklined in more than 20 countries, including Turkey, Germany, and China. Now, she is bringing the sport to unlikely places: refugee settlements in Lebanon.

In 2011, a civil war broke out in Syria. Since then, over 4.5 million refugees have fled the country. About 1 million of them now live in Lebanon, which borders Syria to the west.

Iverson had visited Syria in 2008 and wanted to find a way to help refugees. By now, most Syrians in Lebanon have their basic needs—such as food, shelter, and water—says Iverson. But half the children aren't in school. Instead, many work or help out at home. It's hard to feel—and play—like a kid.

Iverson started a nonprofit called Crossing Lines in 2013 to teach slacklining. While slacklining, kids can play and learn skills such as balance, concentration, and confidence.

Through Crossing Lines, Iverson has visited the Bekaa Valley region of Lebanon four times to show kids how to balance and bounce on a slackline. Each morning, Iverson and her team drove to the settlements and set up the slacklines. They would anchor the cords to anything they could find. "Normally you just need a couple of trees to set up a line. But there aren't a lot of trees here," says Iverson. "Sometimes, we use two cars as the attachment."

Iverson says she enjoyed seeing the kids' progress. At first they found it impossible to walk from one end of the line to the other without holding a teacher's hand. Some were too embarrassed to even try it out. But over the next couple of weeks, they gained more confidence—and better balance. By the end, many of the kids could do yoga poses on the line and walk across it by themselves.

Iverson spent two months this summer teaching even more kids how to slackline. "I love how it connects people," she says.

—Kathryn Free

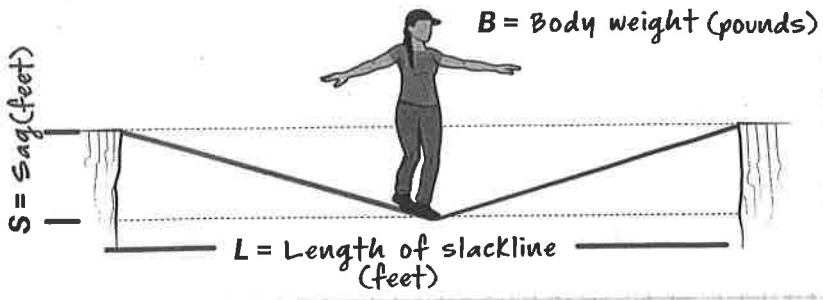
SONYA IVERSON/CROSSING LINES (TOP); SCOTT RODGERS/TARA ATKINSON PHOTOGRAPHY (INSERT); JIM MCMAHON & MAPMAN (MAP); KATE FRANCIS (DIAGRAM)

WORKING WITH A FORMULA

online 2 SKILLS SHEETS

Depending on the type of slacklining you want to do, your line will be at a different tension. The higher the tension, the bouncier it feels. You can use a formula to determine the tension force of a slackline. A formula shows the relationship between different variables. To calculate the tension force of a slackline, you can use this formula:

$$F = \frac{B \times L}{4 \times S}$$



EXAMPLE: What is the tension force for a 20-foot slackline that has 0.8 feet of sag and a person who weighs 120 pounds?

Step 1 Identify your variables.

F = unknown variable you are solving for
B = 120 pounds
L = 20 feet
S = 0.8 feet

Step 2 Rewrite the formula, replacing the variables with the known quantities.

$$F = \frac{120 \times 20}{4 \times 0.8}$$

Step 3 Simplify the equation and isolate the unknown variable if necessary.

$$F = \frac{120 \times 20}{4 \times 0.8} = \frac{2{,}400}{3.2} = 750$$

→ **So this slackline has a tension force of 750 pounds-force.**

YOUR TURN

Use the formula and information above to find the unknown variables. Round your answers to the nearest whole number.

1 Beginners often start out on a 15-foot slackline that has 0.5 feet of sag. If a person starting out weighs 100 pounds, what is the tension force of the slackline?

2 For tricks like bounces and flips, slacklines need greater tension forces. What's the tension force for a slackline that is 85 feet long and has 1 foot of sag with a person weighing 200 pounds?

3 Very loose slacklines, or rodeolines, have lower tension forces and swing more than standard slacklines. If a rodeoline is 65 feet long and has 10 feet of sag with a 150-pound person, what's its tension force?

4 Highlining involves walking along a line that is suspended high above the ground, sometimes hundreds of feet in the air! If a 200-foot-long highline's tension force is 900 pounds-force and the person on the line weighs 175 pounds, how much sag is in the slackline?

5 The ideal tension force for a trick slackline is above 4,000 pounds-force. Say you have a line that is 50 feet long. Should the sag for a 130-pound person be greater than or less than 5 inches to meet the ideal trick tension force? Explain.