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1. Two roads diverged in a yellow wood, and, since they were in fact two travelers, Rosencrantz and Guildenstern decided to take both of them. Rosencrantz had a bike and took the first road going North at 8 mph. Guildenstern, on the other hand, had an ATV and took the road less traveled by going East at 15 mph. How fast is the distance between them changing after an hour?
 2. The Shadow, as portrayed by Alec Baldwin, passes briefly under under an 18 ft tall lamp post. The Shadow's shadow extends down the sidewalk at 60 ft/s, how fast is the Shadow moving? (Hint: Alec Baldwin is 6 ft tall.)
 3. The evil Dr Doofenshmirtz is using his Tree-Drag-Away-inator to steal the christmas tree in downtown Danville. The device works as follow: One end of a chord is attached to the tree's base while the other end is attached to a giant reel at the top of the Doofenshmirtz Evil Inc. building (500 meters up). The chord is being reeled in at a rate of 36 meters per minute and there is currently 1300 meters of chord left to reel in. If Agent P is to retrieve the tree, he'll need to figure out how fast the tree is moving.
 4. After having his plan to replace the queen with an animatronic copy was thwarted, Professor Ratigan escaped to the face of Big Ben. The world's great criminal mind sits at the tip of minute hand, while his pursuer, Basil of Baker Street, sits at the end of the hour hand. For Basil's clever plan to finally capture Ratigan to work he must know their precise relative speed at 9 o'clock. The minute hand on Big Ben is 12 meters long while the hour hand is 9 meters long.
 5. The wizards at the Unseen University have been dabbling in weather magic in an effort to cool down the dining hall and as a result the 250 meter high Tower of Art is falling over after a brief conjuring of gale force winds. Ever the pessimist, the "Wizzard" Rincewind tried to evacuate the tower by climbing down a rope of tied together bed sheets starting from a window at the top. After climbing down 150 meters he discovered he was out of bed sheet and is now moving down at a slow but steady rate of 20 meters per minutes while dangling from the end of his rope. When he finally makes it to the ground, how fast will he be moving horizontally?
 6. Scientist with far too much time on their hands have secured a grant through the Mars Incorporated to build a giant square pen with adjustable sides filled with 250 cubic meters of M&M's (around 340 million individual M&M's, based on a 0.636 cubic centimeter volume for a single M&M and the fact that M&M's occupy around 86% of the space when piled together). The scientists have the sides of the square pen set to contract at 3 meters per second. If the walls of the pen are 20 meters tall and the M&M's are moving up at 8 meters per second when they start pouring over the sides, then how wide is the pen at this point in time?