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LESSON 8.4 Assignment

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3. Matthew is an aerial photographer. He photographs a 200-mile long oil pipeline that runs straight from east to west. He flies the 200 miles from west to east with an eastward tailwind. He returns over the same route and flies 200 miles against an eastward headwind. The total time of the 400-mile flight is 180 minutes. The plane travels at a speed of 150 miles per hour without a tailwind or headwind. Assume the wind speed is constant during the entire flight. Write and solve an equation to determine the wind speed during Matthew's flight. Show your work.
4. Ramona is trying to decide between 2 satellite Internet providers. ProSat Internet charges a \$250 installation fee and a monthly fee of \$50. SuperSat Internet charges a \$90 installation fee and a monthly fee of \$58. Write and solve an equation to determine when the average monthly cost (including installation and monthly fees) of each service would be the same. Show your work.