

Remember to always show all supporting work.

Note I chose two problems from 3.10 (and none from 3.9) to check this time because the 3.10 problems are SO IMPORTANT! Remember to use our steps from class to organize your work, and be extra careful with your units.

1. (5 points) (See WeBWorK 3.10Plus #11) A boy is flying a kite. He is holding the string at a point 4 feet above the ground. The kite is 100 feet high and is moving horizontally downwind. If the boy is paying out string at a rate of 2 feet per second, how fast is the kite moving downwind when 240 feet of string are out? (Assume the kite string is taut.)

(The assignment continues on the back.)

2. (5 points) (See WeBWorK 3.10Plus #8) A conical water tank with vertex down has a radius of 10 feet at the top and is 21 feet high. If water flows into the tank at a rate of 10 cubic feet per minute, how fast is the depth of the water increasing when the water is 16 feet deep?