

Present neatly on separate paper. Justify for full credit. No Calculators.

Name _____ Score _____ 8 minutes / A

1)

A boat leaves a dock at 2:00 PM and travels due south at a speed of 20 km/h. Another boat has been heading due east at 15 km/h and reaches the same dock at 3:00 PM. At what time were the two boats closest together?

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Name _____ Score _____ 8 minutes / F

1)

What is the smallest possible area of the triangle that is cut off by the first quadrant and whose hypotenuse is tangent to the parabola $y = 4 - x^2$ at some point?