Name : ________________________

Round your answer to two decimal places.

1) Sgt. Fletcher of the US Quartermaster Corps is in charge of stores and supplies in a military base with 806 soldiers. The food stock is sufficient for 26 days. How many days will the supply of food last, if there are 676 soldiers?

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2) The cephalic index of a subject varies directly with maximum width of the head and inversely with its length. A subject with a head width of 16.4 cm and head length of 20.5 cm has a cranial index is 80. Calculate the cranial index of another subject whose head width is 15.75 cm and head length is 19.94 cm.

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3) A passenger cruise ship from Bahamas takes 48 hours at an average speed of 21 knots to reach its destination. How much time will the ship take to the port, if the captain accelerates the speed to 24 knots?

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4) The surface area of a cone varies jointly with its radius and its slant height. Esther created a festive party hat with a surface area of 18.84 square inches. It had a diameter of 4 inches and slant height of 3 inches. Determine the surface area of another hat which has a radius of 3 inches and a slant height of 4 inches.

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5) Jared spends $1,315 on accommodation for a 5-day trip to New York city. If he extends his stay for 7 more days, how much would Jared have to pay for his entire stay?

__________________________
Round your answer to two decimal places.

1) Sgt. Fletcher of the US Quartermaster Corps is in charge of stores and supplies in a military base with 806 soldiers. The food stock is sufficient for 26 days. How many days will the supply of food last, if there are 676 soldiers?

31 days

2) The cephalic index of a subject varies directly with maximum width of the head and inversely with its length. A subject whose head width is 16.4 cm and head length is 19.94 cm has a cranial index of 80. Calculate the cranial index of a subject whose head width is 15.75 cm and head length is 17.64 cm.

78.99

3) A passenger cruise ship from Bahamas takes 48 hours at an average speed of 21 knots to reach its destination. How much time will the ship take to the port, if the captain accelerates the speed to 24 knots?

42 hours

4) The surface area of a cone varies jointly with its radius and its slant height. Esther created a festive party hat with a surface area of 18.84 square inches. It had a diameter 4 inches and slant height of 3 inches. Determine the surface area of another hat which has a radius of 3 inches and a slant height of 4 inches.

37.68 square inches

5) Jared spends $1,315 on accommodation for a 5-day trip to New York city. If he extends his stay for 7 more days, how much would Jared have to pay for his entire stay?

$3,156