1

If a taxicab charges x cents for the first 1/9 mile and x/5 cents for each additional 1/9 mile or fraction thereof, what is the charge, in cents, for a ride of y miles, where y is a whole number?

(A) x + (xy-x)/45
(B) x - (xy-x)/45
(C) 2x+9y/5
(D) x + (9x-y)/5
(E) x + (9xy-x)/5

2

If 3/4 of the mineral deposits in a reservoir of water are removed every time a water filtration unit completes a cycle, what fraction of the total minerals present in the water will have been removed after 3 complete filtration cycles?

A. 63/64
B. 25/32
C. 13/16
D. 9/32
E. 1/64

3

In last examination Roger scored marks in each of 5 subjects in the following ratio 4:5:6:7:8 and got an overall score of 72%. If 50% of the maximum marks is passing and the maximum marks of each subject is the same, in how many subjects did Roger fail?

A. 1
B. 2
C. 3
D. 4
E. 5

4

Country ---Amount Recycled--------Amount Disposed of
A-----------16,700------------------- 142,800

B------------8,800---------------------48,000

C-----------13,000---------------------51,400

D------------3,900---------------------20,300

E------------3,300---------------------16,200

The table above shows the amount of waste material, in tons, recycled by each of five counties in a single year and the amount of waste material, also in tons, that was disposed of in landfills by the five counties in that year. Which county had the lowest ratio of waste material disposed of to waste material recycled in the year reported in the table?

A. A
B. B
C. C
D. D
E. E

5

The ratio, by volume, of baking soda to peroxide to water in a certain solution is 2:50:100. The solution will be altered so that the ratio of baking soda to water is halved while the ratio of baking soda to peroxide is doubled. How many cubic centimeters of water will this solution contain if the altered solution will contain 100 cubic centimeters of peroxide?

A. 50
B. 200
C. 400
D. 625
E. 800