

Open Response**CHALLENGER QUESTION**

Use the following information to answer the next question.

A square with a side length of $(2x + 3)$ m is mounted along the width of a rectangle whose length is $(4x + 1)$ m. The width of the rectangle is equal to the side length of the square.

20. What is the combined area of the square and the rectangle?

Show your work.

21. What is the value of x in the equation $12x = 50x - 20$?

- A. 38 B. $\frac{10}{19}$
C. $-\frac{10}{19}$ D. -38

22. The area of a rectangle is 240 cm^2 . If the width of the rectangle is 6 cm, then what is its length?

- A. 40 cm B. 116 cm
C. 232 cm D. 1 440 cm

Use the following information to answer the next question.

The owners of a hotel decide to renovate. The hotel has 189 rooms for guests to stay in, of which 9 are specialty suites. The owners spend \$7 000 000 on refurbishing the rooms. An equal amount was spent on each specialty suite and an equal amount was spent on each regular suite.

* 189
+ 9

198
total!

23. Twice as much money is spent on each specialty suite than on each regular suite. Rounded to the nearest dollar, how much do the owners spend to refurbish each specialty suite?

- A. \$33 816.00 B. \$65 421.00
C. \$67 633.00 D. \$69 815.00

24. A particular rectangle is 3 times longer than it is wide, and its perimeter is 20 cm. What is the width of the rectangle?

- A. 2.5 cm B. 10 cm
C. 15 cm D. 18.75 cm

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25. Alex lives on an acreage. Alex can cut and trim the grass in 2 hours. Alex's son can cut and trim the grass in 3 hours. Working together, what is the time it will take Alex and his son to cut and trim the grass?

Show your work.