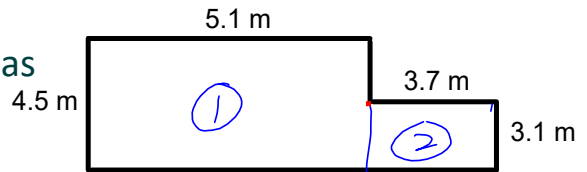


5.5 Applications of Perimeter and Area

Ex. 1: Ryan is replacing the flooring in his combined living room/dining room, as shown in the diagram.



a) Find the total area of the floor.

$$A_1 = l \cdot w \\ = (4.5)(5.1) \\ = 22.95 \text{ m}^2$$

$$A_2 = l \cdot w \\ = 3.7 \times 3.1 \\ = 11.47 \text{ m}^2$$

$$\text{Total} \\ = 34.42 \text{ m}^2$$

b) Flooring comes in packages of 2 m^2 . How many packages are needed?

$$\# \text{ of packages} = \frac{34.42 \text{ m}^2}{2 \text{ m}^2} \\ = 17.21 \rightarrow \therefore \text{Buy } 18$$

c) One package of flooring costs \$49.95. How much will flooring cost? (Include 13% HST).

$$18 \times 49.95 \\ = 899.10$$

$$\text{Tax} \\ 899.10 \times 0.13 \\ = 116.89$$

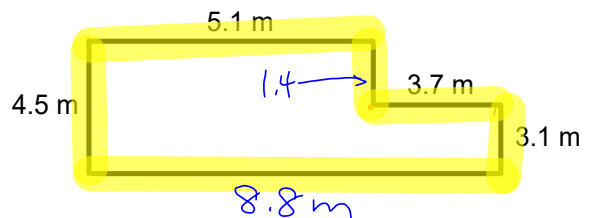
$$\text{Total} \\ = 899.10 + 116.89 \\ = \$1015.99$$

$$\text{Total: } 899.10 \times 1.13 \\ = 1015.99$$

total ← extra tax ←

d) Find the perimeter of the combined rooms.

$$P = 4.5 + 5.1 + 1.4 + 3.7 + 3.1 + 8.8 \\ = 26.6 \text{ m}$$

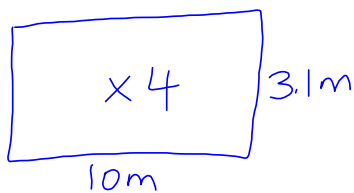


e) Baseboard molding for the edge of the floor comes in 3 m lengths. How many 3-m lengths will be needed?

$$\# \text{ of baseboards} = \frac{26.6}{3} \\ = 8.87 \rightarrow \therefore \text{Buy } 9$$

Ex. 2: Dorotea is wallpapering her bedroom. Each roll of wallpaper covers 12 m^2 . Her room is square, and each wall is 10 m long and 3.1 m high.

a) How many rolls of wallpaper must she buy?



Homework

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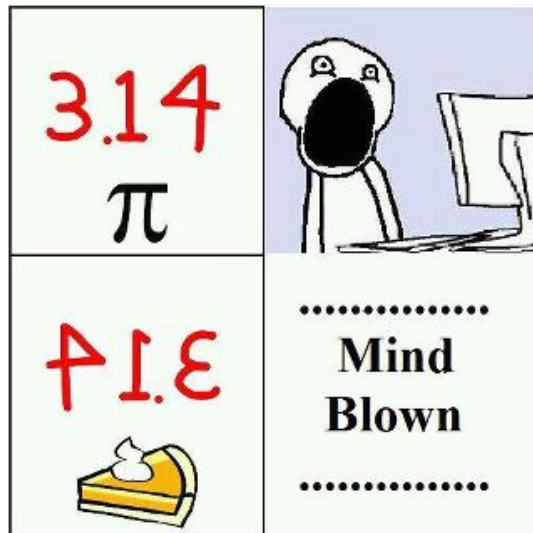
b) Each roll of wallpaper costs \$19.95. What would be the cost for this wallpaper, including 13% HST?

c) Why might the number of rolls needed be more than your answer in a)?

Homework

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Attachments

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