A # 10

Area Homework #2

18 in = 1½ ft.

1)

1½ ft.
14 ft.
14 2 ft.
8 ft.
3 ft.
5 ft.
16 ft.
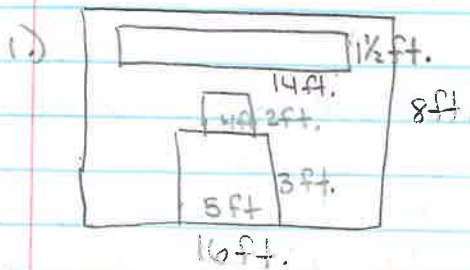
A.) How many sq.ft of wall covered?

Area whole wall − [Area not covered]

$$\left(A_{whole} = bh\right) - \left[\left(A_{\square} = bh\right) + \left(A_{\boxminus} = bh\right) + \left(A_{\square} = bh\right)\right]$$

window   mirror   fireplace

$$H\left(16(8)\right) - \left[\;14(1½) + 4(2) + 5(3)\;\right]$$

$$128 - \left[21 + 8 + 15\right]$$

$$128 - 44$$

The wall paper will need to cover 84 sq.ft.

84 sq.ft.

b.) Rolls − 18 in wide
    33 ft. long
    18 in = 1½ ft.

what is the total area of a roll?

How many rolls needed to cover wall?

$$A_{ROLL} = bh$$
$$A_{roll} = 33(1½)$$
$$A_{roll} = 49.5 \text{ sq. ft.}$$

$$\left(\begin{array}{c}Total \\ Area\end{array}\right) \div \left(\begin{array}{c}sq.ft \\ in \\ roll\end{array}\right)$$

The roll has an area of 49.5 sq.ft.
Two rolls will be needed to cover the wall.

$$84 \div 49.5$$
$$1.\overline{69}$$
$$\approx 2 \text{ rolls}$$

c.) $11.99 per roll
    2 rolls needed
    total cost?

$$\left(\begin{array}{c}\$ \\ per\,roll\end{array}\right)\left(\begin{array}{c}\#\,of \\ Rolls\end{array}\right)$$

$$11.99(2)$$

$$\$23.98 \text{ total}$$

The cost of the two rolls is $23.98

d.) $22.99 /gallon for 200 sq.ft.
    coated Twice
    Cost to cover wall?

Only 1 can will be needed to cover the wall for $22.99.

$$\left(\begin{array}{c}sq.ft \\ gallon\end{array}\right) \div \left[\left(\begin{array}{c}sq.ft \\ of\,wall\end{array}\right)2\right]$$

$$200 \div [2(84)]$$

$$200 \div 168$$
$$1.19$$

2.) what is the area of the path?
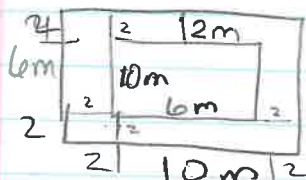
(Area whole bed) − (Area flower bed)
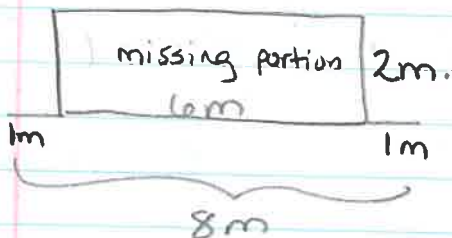
$$\begin{pmatrix} bh \\ 14(10) \end{pmatrix} - \begin{pmatrix} bh \\ 10(6) \end{pmatrix}$$

140 − 60

80 sq. ft.

The area of the path is 80 sq. ft.

3.) Find missing portion of the deck.

The length of the missing portion will be 6m. Since the total length is 8m. and we have to take off 2 of the 1m sides.

$A_{missing} = bh$

$A_{missing} = 6(2)$

$A_{missing} = 12$ sq m.

* The area of the missing portion is 12 sq. m.

2nd way

(Total Area) − [(Area bottom Rec) + (Area left piece) + (Area top piece) + (Area Right piece)]

$8(6) - [8(1) + 1(5) + 7(3) + 1(2)]$

$48 - [8 + 5 + 21 + 2]$

$48 - 36$

12 sq. m.

4) $2\left[\ \frac{1}{2}bh\ \right]+\left(\ b_2h_2\ \right)$

$\overset{\text{Area}}{\underset{\text{squares}}{}}$ $\overset{\text{Area}}{\underset{\text{Rectangle}}{}}$

$2\left[\ 2(2)\ +\ 6(2)\ \right]$

$2\ [\ 4\ ]\ +\ (12)$

$8+12$

$\boxed{T.A.=20\ sq.cm}$

5)

$A = \frac{1}{2}bh + \frac{1}{2}h(b_1+b_2)$

$\overset{\text{Area}}{\triangle}\ +\ \overset{\text{Area}}{\text{trapezoid}}$
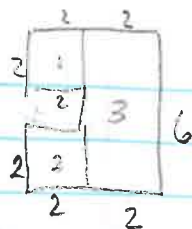
$\left(\frac{1}{2}(10)(3)\right)+\left(\frac{1}{2}(6)(10+6)\right)$

$15+48$

$\boxed{TA = 63\ sq.cm.}$

6)
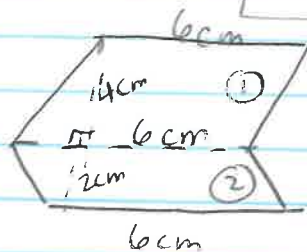
$A = b_1h_1 + b_2h_2$

$\left(6(4)\right)+\left(6(2)\right)$

$24+12$

$\boxed{TA = 36\ sq.cm.}$

7) $\left(\frac{1}{2}bh\right)+\left[\left(\frac{1}{2}bh\right)\left(\#\text{ of }\triangle\atop\text{Triangles}\right)\right]$

$\overset{\text{Triangle}}{}\qquad\qquad\overset{\text{Pentagon}}{}$

$\left(\frac{1}{2}(42.3)(24.7)\right)+\left[\left(\frac{1}{2}(26)(18)\right)(5)\right]$

$522.405 + (234)(5)$

$522.405 + 1170$

$\boxed{TA = 1692.405\ sq.ft.}$