b) $A = 25 - (\ell - 5)^2$ (Expand)

$= 25 - (\ell^2 - 10\ell + 25)$

$= 25 - \ell^2 + 10\ell - 25$

$A = -\ell^2 + 10\ell$ ✓ (verified)

c) For Area to be maximum then the diminished part should be zero

hence $\ell - 5 = 0$

Thus $\ell = 5m$

Check: For $\ell = 5$

$A = 25 - (5-5)^2$

$\boxed{A = 25m^2}$

4) Case of a discount:

* New price = old price $\left(1 - \frac{5}{100}\right)$

$4275 = \text{old price}\,(0.95)$

$\text{old price} = \frac{4275}{0.95} = 4500\ \$$

Hence, the cost of tiling $20m^2$ is $4500\ \$$

Thus, tiling $1m^2$ costs: $\frac{4500}{20} = 225\ \$$

§ 2nd exercise:

1) M belongs to [AB] (given)

AB = 6cm (given)

Thus, the encirclement of x is: $0 < x < 6$

2a) ABCD is a rectangle (given)

then $\hat{CBM} = 90°$ (angle formed by adj sides of a rectangle)

So, $\triangle$ CBM is right at B

$\text{Area}_{CBM} = \frac{\text{leg}_1 \times \text{leg}_2}{2}$

$= \frac{BM \times BA}{2}$

$\text{Area}_{CBM} = \frac{(6-x)4}{2}$

$\text{Area}_{CBM} = 2(6-x)\ cm^2$ units square

$\boxed{A_1 = 12 - 2x}\ cm^2$ units square