

```
> restart;  
> Demand := P = 1200 - (16/100)*Q;  
Demand := P = 1200 -  $\frac{4}{25} Q$  (1)
```

```
> Production := Q = E;  
Production := Q = E (2)
```

```
> Revenue := R = P*Q;  
Revenue := R = P Q (3)
```

```
> Profit := pi = R - w*E;  
Profit :=  $\pi = R - w E$  (4)
```

```
> TotalIncome := Income = (R + 320*(N-E));  
TotalIncome := Income = R + 320 N - 320 E (5)
```

```
> Membership := N=2000;  
Membership := N = 2000 (6)
```

```
> eval(subs(Demand,Production,Revenue));  
R =  $\left(1200 - \frac{4}{25} E\right) E$  (7)
```

```
> eval(subs(%,Membership,TotalIncome));  
Income =  $\left(1200 - \frac{4}{25} E\right) E + 640000 - 320 E$  (8)
```

```
> plot(rhs(%),E=0..2000,thickness=3);
```

