Each problem is worth 5 points. For full credit indicate clearly how you reached your answer.

1. Solve for x:

$$5^{3x} = 25^{x+2}$$

$$5^{3x} = 5^{2(x+2)}$$

$$3x = 2x + 4$$

$$x = 4 \quad \text{//}$$

Nice.

2. If a farmer uses 25 pounds of active DDT, assuming its half-life is 12 years, how much will still be active after 30 years?

$25(\frac{1}{2}^{t/12})$

$25(\frac{1}{2}^{30/12})$

$25(\frac{1}{2}^{2.5})$ ← calculator

$25(.1767)$

$\boxed{4.41\,lbs}$

Good

To set it up there is 25 pounds and its half life is at 12 yrs so it wants to know how much will still be active after 30 yrs so I set it up as $25(\frac{1}{2}^{t/12})$ and plugged 30 in for t.