

$$4) 2P = P \times \left(1 + \frac{0.12}{4}\right)^{4Y}$$

$$2 = 1.03^{4Y}$$

$$\log(2) = 4Y \log(1.03)$$

$$\text{So } Y = \frac{\log(2)}{4 \log(1.03)}$$

$$4 \log(1.03) = 0.051348899$$

$$5) A = \$525 \times \left(1 + \frac{0.045}{4}\right)^{4(11)}$$

$$0.051 \times 4 = 0.204$$

$$\$525 \times 1.01125^{(44)}$$

$$\$525 \times 1.035970708$$

= \$858.88 is what she ends up with

63.60% Interest Overall

$$6) 50,000 = P \times \left(1 + \frac{0.045}{12}\right)^{12(10)}$$

$$\text{So } \$50,000 = P \times 1.00375^{120}$$

$$P \times 1.566992776$$

$$\text{So } P = \frac{50,000}{1.566992776}$$

\$31,908.25 is what Dan needs to deposit monthly.

$$7) \$130 = P \times \frac{0.045}{12}$$

$$\frac{0.00375}{1 - \left(1 + \frac{0.045}{12}\right)^{-12 \times 4}}$$

$$0.00375$$

$$1 - 1.00375^{(-48)}$$

$$0.00375$$

$$0.16444854$$

$$\$130 = P \times 0.022803486$$

P = \$5710.88 is what she needs to borrow

$$130$$

$$0.022803486$$