Math 2260 Quiz 14.5 (Practice)

Name _____

Points will be deducted for untidy or disorganized answers

1. (2 points) For what values of x does the infinite series

$$\sum_{n=1}^{\infty} \left(\frac{1-x}{2} \right)^n$$

   converge and find the sum of the series (as a function of x) for thiose values of x.

2. (3 points) Determine which of the follow series converge, and which diverge. Give reasons for your answer. If the series is convergent, find its sum.

   (a)
$$\sum_{n=1}^{\infty} (-1)^{n-1} \frac{3}{2^n}$$

   (b)
$$\sum_{n=1}^{\infty} \left(\frac{5}{2^n} - \frac{1}{3^n} \right)$$

   (c)
$$\sum_{n=1}^{\infty} \left(1 - \frac{1}{n} \right)^n$$