Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Write the first 4 terms in the sequence $\left\{ \dfrac{1}{n^2} \right\}_{n=1}^{\infty}$.

$a_1 = \dfrac{1}{(1)^2} = \boxed{1}$

$a_2 = \dfrac{1}{(2)^2} = \boxed{\dfrac{1}{4}}$

$a_3 = \dfrac{1}{(3)^2} = \boxed{\dfrac{1}{9}}$

$a_4 = \dfrac{1}{(4)^2} = \boxed{\dfrac{1}{16}}$

Good

2. Write the first four partial sums of the series $\displaystyle\sum_{n=1}^{\infty} \dfrac{1}{n^2}$.

$S_1 = \boxed{1}$

$S_2 = 1 + \dfrac{1}{4} = \boxed{\dfrac{5}{4}}$

$S_3 = 1 + \dfrac{1}{4} + \dfrac{1}{9} = \boxed{\dfrac{49}{36}}$

$S_4 = 1 + \dfrac{1}{4} + \dfrac{1}{9} + \dfrac{1}{16} = \boxed{\dfrac{205}{144}}$

Great