8TH Grade Home Work 7A

Due Dtae: April 13, 2014

21.5.3★ Simplify $\dfrac{(100^2-99^2)(100^2-98^2)(100^2-97^2)\cdots(100^2-1^2)}{(99^2-98^2)(99^2-97^2)(99^2-96^2)\cdots(99^2-1^2)}$.

21.5.4★ Evaluate the sum

$$\frac{3}{1^2\cdot 2^2}+\frac{5}{2^2\cdot 3^2}+\frac{7}{3^2\cdot 4^2}+\cdots$$

Problem 21.24: Evaluate the sum $\dfrac{1}{1\cdot 2}+\dfrac{1}{2\cdot 3}+\dfrac{1}{3\cdot 4}+\dfrac{1}{4\cdot 5}+\cdots+\dfrac{1}{99\cdot 100}$.

21.4.2 Find a simple expression equal to $1+2+2^2+2^3+2^4+\cdots+2^n$.