MPS21XH - Binomial Theorem Problem Set
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1.) Compute the coefficient of x^4 in $(x+2)^7$.

2.) Find the constant term in the expansion of $(x^2+\frac{1}{x})^6$.

3.) Compute the coefficient of a^4b^6 in the expansion of $(2a-b)^{10}$.

4.) Compute the sum of the last 3 coefficients in the expansion of $(1-\frac{1}{a})^6$.

5.) Find the coefficient of x^7 in the expansion of $(\frac{x^2}{2}-\frac{2}{x})^8$.

6.) Find the coefficients of x^3 and $x^{\frac{5}{2}}$ in the expansion of $(\sqrt{x}-1)^8$.

Answers:

1.) 280

2.) 15

3.) 3360

4.) 10

5.) -14

6.) The coefficient of x^3 is 28 and the coefficient of $x^{\frac{5}{2}}$ is -56.