$$A1 = \frac{m+n-m+n}{2mn} = \frac{2n}{2mn} = \frac{1}{m} = 1$$

$$A2 = \frac{8^2}{(8-3)(6+3)} = \frac{8^2-8^2-36}{8-3} = \frac{3}{(8-3)(6+3)} = \frac{3}{8^2-9} = 3$$

$$A3 = \frac{m^{m-2}}{(m-2)(m+2)} + \frac{2^{(m+2)}}{(m-2)^2} = \frac{m^2-2m+2m+4}{(m-2)^2(m+2)} = \frac{m^2+4}{(m+2)(m-2)^2} = \frac{1}{m}$$

$$A4 = \frac{a+6}{8-a} = \frac{a^2+8^2}{a-6} = \frac{a^2-6^2}{a-6} = \frac{-28^2}{a-6}$$

$$= \frac{28^2}{8-a} = 3$$