i.
$$\frac{1}{\sqrt{5}-1}$$

ii.
$$\frac{2}{\sqrt{7} + \sqrt{3}}$$

a.

$$(x + y)^2 - (x - y)^2 = 4xy$$

$$\beta. \left(2013 + \frac{1}{2013}\right)^2 - \left(2013 - \frac{1}{2013}\right)^2.$$