



Problema 4. Aflați numărul natural a pentru care

$$\{[(2009 + a) : 2010 + 2011] : 2012 + 2013\} : 2014 + 2015 = 2016$$

Soluție

$$\{[(2009 + a) : 2010 + 2011] : 2012 + 2013\} : 2014 = 2016 - 2015$$

$$\{[(2009 + a) : 2010 + 2011] : 2012 + 2013\} : 2014 = 1$$

$$[(2009 + a) : 2010 + 2011] : 2012 + 2013 = 2014 \times 1 = 2014$$

$$[(2009 + a) : 2010 + 2011] : 2012 = 2014 - 2013$$

$$[(2009 + a) : 2010 + 2011] : 2012 = 1$$

$$(2009 + a) : 2010 + 2011 = 1 \times 2012$$

$$(2009 + a) : 2010 + 2011 = 2012$$

$$(2009 + a) : 2010 = 2012 - 2011$$

$$(2009 + a) : 2010 = 1$$

$$2009 + a = 1 \times 2010$$

$$2009 + a = 2010$$

$$a = 2010 - 2009$$

$$\boxed{a = 1}$$