

1.

$\alpha = 53^\circ 15'$
 $\beta = 60^\circ 12'$
 $\gamma = 13^\circ 18'$

2014 23
 2015
 2014 23
 2015 -

2.

$24 \cdot 3600 = 86400$
 $= 2 / 86400 = 7,27 \cdot 10^{-5} (/)$
 $= 360 / 86400 = 4,17 \cdot 10^{-3} (^\circ /) = 15 (^\circ /)$

$= 2 \text{ R/}$
 $: \mathbf{R} = 6400 = 6400000$
 $= (2 * 3,14 * 6400000) / 86400 = 465 / = 1674 /$
 $(= 53^\circ 15')$
 $6400 * \sin 53^\circ 15' =$
 5120
 $= (2 * 3,14 * 5120000) / 86400 = 372,15 / = 1340 /$

$$= / = 2 / 365 =$$

$$0,017(/) = 0,986(^\circ /).$$

$$: = 2 \text{ R/}$$

$$= (2 * 3,14 * 149 * 10^6) / 365 = 2,56 * 10^6 (/) = 29,7(/).$$

$$0,986(^\circ /) \quad 15(^\circ /),$$

$$3. \quad ? \quad :$$

?

$$(3-6) \quad (2-5),$$

5 ,

4.

?

?

19

5.

$$: = u \ln (M/m).$$

?

6.

10^{30}

20 . ?

$$F=ma.$$

= 1820 / .

$$[= \sqrt{\frac{GM}{R}} .$$