

we need 3rd Kepler's law to solve this problem. According to this law,

$$t_1^2/t_2^2 = a_1^3/a_2^3$$

where a is semimajor axis and t is period. So we find

$$t_2 = t_1 (a_2/a_1)^{3/2}$$

knowing that for Earth $t_1 = 1$ year, $a_1 = 1$ au, we can see

$$t_2 = 1 * (4/1)^{3/2} = 1 * 8 = 8 \text{ years}$$

answer is 8 years