

SHOW YOUR WORK

1. When a couple's first child is born they invest \$10,000 in an account that pays 8% interest annually. How much will be in the account when the child turns 18 years old?
2. The population of a certain city has been increasing 1.4% each year. In 2006 the population was 125,000. Find the population of the city in the following years, to the nearest whole number.:
a) 2010
b) 1999
3. The number of cells in a culture doubles every 40 minutes. There are 100 cells at 9:00 am. Find the number of cells at each given time. Round to the nearest whole number.
a) 1:00 pm
b) 3:30 pm
4. Every 10 days the amount of garbage in a landfill increases by 12%. If there is 50,000 tons of garbage in the landfill on July 1 find the number of tons of garbage in the landfill for each given date. Round to the nearest tenth.
a) July 31
b) August 23
5. The half-life of a certain medicine is 50 minutes. At 1:00 pm a test shows that there is 100 mg in the patient's blood stream. Find the amount of medicine in the patient's blood stream at each given time, the same day. Round to the nearest hundredth of a mg.
a) 6:00 pm.
b) 11:30 am.