1. Taxes

Along with incomes, people’s charitable contributions have steadily increased over the past

few years. The table below shows the average deduction for charitable contributions

reported on individual income tax returns for the period 2007 to 2012. Find the average rate

of change between 2009 and 2011.

|  |  |
| --- | --- |
| Year | Charitable Contributions |
|  |  |
| 2007 | $1980 |
| 2008 | $2350 |
| 2009 | $2490 |
| 2010 | $2760 |
| 2011 | $3060 |
| 2012 | 3120 |

2. Given the following piecewise function:

(𝑥) = −𝑥 +1 𝑓𝑜𝑟 𝑥 < 0

−1 𝑓𝑜𝑟 0 ≤ 𝑥 ≤ 3

−2𝑥 𝑓𝑜𝑟 𝑥 > 3

a. Find the domain.

b. Find the range.

c. Find the intercepts.

d. Is f continuous on its domain? If not, state where f is discontinuous.

e. Graph the function.