

- (4.) (11 points) The table below gives the approximate number of cell phone subscribers, S , in millions, worldwide.

| | | | | | | |
|-------------|------|------|------|------|------|------|
| Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| Subscribers | 91 | 138 | 210 | 320 | 485 | 738 |

- (a) Demonstrate using the data in the table why it makes sense to model this data with an exponential function. Explain your reasoning.

- (b) Write a formula for S as an exponential function of t , the number of years since 1995.

- (c) In a single sentence describe how the number of cell phone subscribers has been changing since 1995. Use everyday words and do not use the symbols S or t .