Section 1

Fill in the blanks below with the most suitable word or phrase:

1. Zero divided by any real number is _____ , any real number divided by

   zero is _____ .

2. The square root of any positive number _____ , the square root

   of any negative number _____ .

3. The cube root of any positive number _____ , the cube root of any

   negative number _____ .

4. Another notation that can be used to represent a square root ($\sqrt{}$) is _____ ;

   another notation that can be used to represent a cube root ($\sqrt[3]{}$) is _____ .

Section 2

Without the use of a calculator evaluate the following:

1. $(-400)^2 =$ 2. $(50)^3 =$

3. $(0.00011)^2 =$ 4. $\left(\frac{5ab^2}{3c^3}\right)^3 =$

Section 3

Without the use of a calculator evaluate the following:

1. $\sqrt{144,000,000}^2 =$

2. $\sqrt[3]{-27000} =$

3. $(0.000625)^{\frac{1}{2}} =$

4. $(-13,824)^{\frac{1}{3}} =$

Section 4

Without the use of a calculator evaluate the following (remember to use BEMDAS):

1. $(5 + 2)^2 - 9 \times 3 - 2^3 =$

2. $(\sqrt{81} - 8)^3 + 3 \times 2^4 + 0 \times 5^2 =$

3. $9 + 6(7 - 2) \div 3 - [8 - (3^2 - \sqrt{16})] =$

4. $\dfrac{2^4 + (16 - 3 \times 4)}{(6 + 3^2) \div \sqrt{1 + 2 \times 4}} =$