As a business person, you deal with negative and positive numbers all the time to track inventory, income and expenses. Money that comes in is a positive. Money that goes out is a negative. You hope the end result comes out positive, but it doesn’t always work that way!

Note: You should be able to do all the calculations on this sheet without a calculator although you may use one to check your answers. Remember that you are not allowed a calculator on the Foundation Skills Test.

1. You buy 500 hexagon tiles at $.40 each.
   1. Indicate if each of the following values is negative or positive from your perspective as the business owner.

500 tiles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ You pay $.40 each \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Total amount \_\_\_\_\_\_\_\_\_\_\_\_

* 1. Now write a number sentence using the numbers to find the total amount.

1. Write number sentences to find the total amount in each situation.
   1. Buy 1200 white rhombi at $.10 each. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Buy 50 trapezoids at $.60 each. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. You order a box of tiles for which you pay $.20/tile. When they arrive, 50 of them are broken which means the manufacturer will have to refund money to your account.
   1. Indicate if each of the following values is negative or positive from your perspective as the business owner. For price, assume your account has already been charged for the tiles.

50 tiles \_\_\_\_\_\_\_\_\_\_\_\_ You pay $.20 each \_\_\_\_\_\_\_\_\_\_\_\_\_ Change to your account \_\_\_\_\_\_\_\_\_

* 1. Now write a number sentence using the numbers to find the total amount.

1. Use the examples above to summarize rules of multiplying negative and positive numbers.
   1. Multiplying two positives yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. Multiplying a negative and positive yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   3. Multiplying two negatives yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. You know that multiplication and division are related. Determine if the rules for multiplication also work for division. Use your calculator to try at least three examples (write your examples below) and then complete the rule.
   1. Dividing a positive by a negative yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   2. Dividing a negative by a positive yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   3. Dividing a negative by a negative yields a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Enter the following two expressions into your calculator exactly as written below and record the results.

|  |  |
| --- | --- |
| * 1. (-5)2 | * 1. -52 |

* 1. Explain your results.