S.M.ART School **MBA3 Homework for MS4 due 10-05-2023**

Factor using Major Algebraic Identities

F1 $(6*x - 7)^2 - (6*x + 7)^2$

F2 $(6*x - 7)^2 - (-6*x - 7)^2$

F3 $(6*x - 7)^2 - (5*x + 7)^2$

F4 $(6*x - 5*y)^2 - (5*x - 6*y)^2$

A1

Find $(x + 1/x) * (x - 1/x)$, if $x^2 = 2$

Simplify Expression

S1 $((4*a*c) / (a^2 - c^2)) * (a + c) / (a*c)$

S2 $((x^2 - a^2) / (2*a*x^2)) * a*x / (a + x)$

S3 $((4*a^2) / (a^2 - 4)) * (a + 2) / (2*a)$

S4 $(v / (a^2 - a*v)) / (v^2 / (a^2 - v^2))$

P1 2.56 % of N is 064% of 32. What is the value of N?

P2 0.81 % of 5/3 is 27% of N. What is the value of N?

P3 The price after discount was 60% less than original price. Then it was decreased by another 20%. What percentage increase is needed to get back to the original price?

P4 A store usually sells a certain item at 70% profit. One week the store has a sale, during which the item is sold for 40% less than usual price. During the sale, what is the percentage profit the store makes on each of the items?

P5 The product of 3 numbers equals 8,000. First two factors were increased by 1/4 each. The third factor was decreased by 20%. Find the value of the product of the resulting numbers.

Q1

What is the value of a if a is positive and $a \times a \times a = a + a + a$?