Expressions with Indices

1) Write all of these expressions as simply as possible.

a) a x a

b) $x \times x \times x \times x$

c) a + a

d) $x + x + x + x$

e) $x \times x \times y$

f) $x \times x \times x \times y$

g) $x \times y \times y$

h) $x \times x \times y \times y$

i) $3 \times x \times y$

j) $3 \times x \times y + 2 \times x \times x$

k) $7 \times x \times x \times x + 4 \times x \times y \times y$

2) Evaluate each of the below expressions for the following values:

a = 3, b = 6, c = 0.5

a) $3a$

b) $3a^2$

c) xy

d) xz

e) x^2y

f) xy^2

g) $(xy)^2$

h) $2xyz$

i) $4z^2$

j) $5x^2yz$

k) $3xy + 2x^2$

l) $5xy + z^2$

3) What is the difference between xy^2 and $(xy)^2$? Explain why, with reference to at least one example.