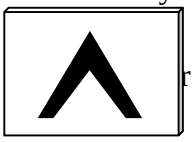
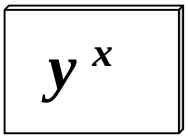
RAISING POSITIVE DECIMALS SMALLER THAN ONE TO NONNEGATIVE INTEGER EXPONENTS

✲ When working with decimals with only one non-zero digit, exponentiation amounts to raising the non-zero digit to the given power and then moving the decimal point the correct number of places to the left, and adding zeros as place holders.
✲ When working with decimals having more then one non-zero digit, using a calculator is the best approach. Depending on your calculator the two buttons you need to make note of are



or



Model Problems:

1. $(0.001)^3 \Rightarrow$ raise 1 to the third power (1^3=1) and since the number of digits after the decimal point is three the result should have nine digits after the decimal point (# of digits after the decimal point in the original decimal times the exponent) $\Rightarrow 0.000000001$

2. $(0.02)^5 \Rightarrow$ raise 2 to the fifth power ($2^5 = 32$)and make sure the result has ten digits after the decimal point $\Rightarrow 0.0000000032$

3. $(0.34)^4 \Rightarrow$ here we will be using a calculator by first entering 0.34, then pressing one of the two buttons shown above, and depending on your calculator, pressing 4 (the exponent) $\Rightarrow 0.01336336$

Practice Exercises:

Evaluate:

1.	$(0.1)^6$	2.	$(0.03)^3$	3.	$(0.00004)^2$	4.	$(0.8)^2$
5.	$(0.05)^3$	6.	$(0.27)^2$	7.	$(0.071)^3$	8.	$(0.91)^4$
9.	$(0.02)^3(0.98)^2$	10.	$(0.25)^2(0.75)^4$	11.	$10(0.3)^2(0.7)^3$	12.	$5(0.2)^4(0.8)^1$
13.	$6(0.65)^6(0.35)^0$						

Answers:

1.	0.000001	5.	0.000125	9.	0.0000076832
2.	0.000027	6.	0.0729	10.	0.019775390625
3.	0.0000000016	7.	0.000357911	11.	0.3087
4.	0.64	8.	0.68574961	12.	0.0064
13.	0.45251334375				