Math 100 CHAPTER 1 FLASHCARDS

Below is a list of flashcards for Chapter 1 - feel free to make more of your own! Here are some suggestions for using them:

- After making the cards, shuffle them well to form a practice deck.
- When checking the answers, focus on the principle(s) involved, not just the answer.
- When you get an item correct, remove its card from the practice deck, to focus on the ones you do not get correct.
- Reinsert cards for which you got the correct answer into the practice deck some time after you got them correct, to make sure you stay refreshed on them.

Front	**Back**
$(-4)^2$	$(-4)^2 = (-4)(-4) = 16$
-7^2	$-7^2 = -(7 \cdot 7) = -49$
$\left(\frac{3}{4}\right)^2$ is	$\frac{3}{4} \cdot \frac{3}{4} = \frac{9}{16}$
The next step in simplifying $5 - 3(4 + 7)$ is	$5 - 3(11)$
When $x = -2$, $x^2 - 3x + 1$ is	Fill ( ) in $(\ )^2 - 3(\ ) + 1$ with -2 to get $(-2)^2 - 3(-2) + 1 = 4 + 6 + 1 = 11$
When $x = -7$, $5x + x^2$ is	Fill ( ) in $5(\ ) + (\ )^2$ with -7 to get $5(-7) + (-7)^2 = -35 + 49 = 14$
When $x = -4$, $5x - x^2$ is	Fill ( ) in $5(\ ) - (\ )^2$ with -4 to get $5(-4) - (-4)^2 = -20 - 16 = -36$
The next step in simplifying $5x - 3(7x - 4)$ is	$5x - 21x + 12$

Front	Back
Simplify $(3x^5)(6x^7)$	$(3x^5)(6x^7) = 3 \cdot 6x^5x^7 = 18(xxxxx)(xxxxxxx) = 18x^{12}$
Simplify $(5x^2)^3$	$(5x^2)^3 = (5x^2)(5x^2)(5x^2) = 5 \cdot 5 \cdot 5(xx)(xx)(xx) = 125x^6$
Simplify $\dfrac{3x^2}{9x^7}$	$\dfrac{3x^2}{9x^7} = \dfrac{3}{9} \cdot \dfrac{xx}{xxxxxxx} = \dfrac{1}{3} \cdot \dfrac{1}{xxxxx} = \dfrac{1}{3x^5}$
Simplify $\left(\dfrac{x^6}{2x^5}\right)^3$	$\left(\dfrac{x^6}{2x^5}\right)^3 = \left(\dfrac{1}{2} \cdot \dfrac{xxxxxx}{xxxxx}\right)^3 = \left(\dfrac{x}{2}\right)^3 = \dfrac{x}{2} \cdot \dfrac{x}{2} \cdot \dfrac{x}{2} = \dfrac{x^3}{8}$
5^{-2} is	$5^{-2} = \dfrac{1}{5^2} = \dfrac{1}{25}$
3^0 is	$3^0 = 1$, because $a^0 = 1$ as long as $a \neq 0$
$\left(\dfrac{2}{5}\right)^{-3}$ is	$\left(\dfrac{2}{5}\right)^{-3} = \left(\dfrac{5}{2}\right)^3 = \dfrac{5}{2} \cdot \dfrac{5}{2} \cdot \dfrac{5}{2}$
In scientific notation, 0.0027 is	2.7×10^{-2}
The decimal form of 8.62×10^4 is	$86,200$
In scientific notation, 7100 is	7.1×10^3
The decimal form of 3×10^{-5} is	0.00003