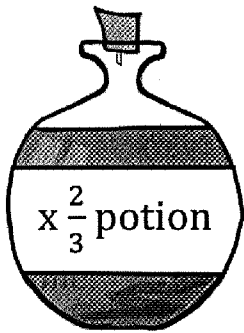Name: _____
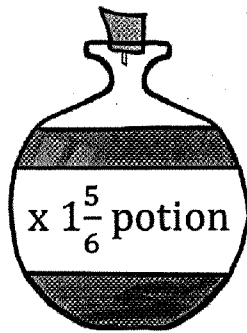
Dr. Von Scalenstein, the mad scientist, created sizing potions that can cause objects to grow or shrink. Five of his potions are shown below. Label each potion with the word *growing* or *shrinking* to show the effect of the potion.
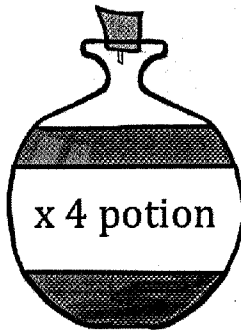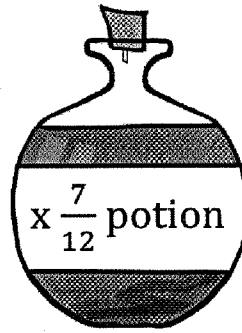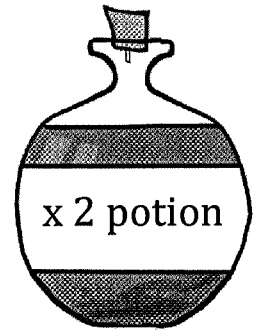
$x \frac{2}{3}$ potion	$x 1\frac{5}{6}$ potion	$x 4$ potion	$x \frac{7}{12}$ potion	$x 2$ potion
_____ potion	_____ potion	_____ potion	_____ potion	_____ potion

Find the fraction of each number.

$\frac{1}{3}$ of 24 = ____ $\frac{1}{5}$ of 20 = ____ $\frac{1}{10}$ of 30 = ____

$\frac{2}{3}$ of 24 = ____ $\frac{3}{5}$ of 20 = ____ $\frac{6}{10}$ of 30 = ____

Fill in the blanks.

3^2 base: ____ exponent: ____ 5^8 base: ____ exponent: ____

7^4 base: ____ exponent: ____ 2^1 base: ____ exponent: ____

4^5 = ____ to the _____ power 3^2 = ____ to the _____ power

Find the products for at least three of the problems in the first row and two problems in the second row.

103	887	682	418	6,827	3,905	5,074
× 4	× 9	× 6	× 7	× 3	× 2	× 6

38	85	88	49	73
× 44	× 25	× 48	× 96	× 63

Place a ✓ next to the true statement.

$$\boxed{\frac{2}{3} \times \frac{5}{5}}$$

_____ The product is less than $\frac{2}{3}$.

_____ The product is equal to $\frac{2}{3}$.

_____ The product is greater than $\frac{2}{3}$.

$$\boxed{\frac{10}{2} \times \frac{3}{4}}$$

_____ The product is less than $\frac{3}{4}$.

_____ The product is equal to $\frac{3}{4}$.

_____ The product is greater to $\frac{3}{4}$.