T3-12 Number $\qquad$ Name $\qquad$ Period $\qquad$ Score $\qquad$

1) Which of the following equations are proportional (circle all that apply). Explain how you know.
a) $y=\frac{1}{7} x$
b) $y=3 x+6$
c) $y=\frac{2}{3} x+0$
d) $y=4 x$
2) Fill in the missing values to make the table proportional.

| $x$ | $y$ |
| :---: | :---: |
| 12 | 3 |
|  | 5 |
| 24 |  |
|  | 10 |

3) You are painting your room the perfect shade of sky blue. To make this perfect shade it is 1part white paint to 3-parts blue paint. You accidentally mix up this proportion and make a mixture that is 1-part blue paint and 3-parts white paint. How much more blue and white paint do you need to ADD to get the perfect shared of sky blue?
4) Use the image to find the following:
a. $m<A C E$ $\qquad$
b. $m<E C L$ $\qquad$
c. $m<A C L$ $\qquad$
d. $x=$ $\qquad$


Factor the following expressions:
5)
$12 x+16$
6) $8 x+10$
7) $15 x+8$

