4.5 Dividing Polynomials by Monomials

$$
\begin{aligned}
& \text { modeling } \\
& \text { (1) } \frac{6 x^{2}+4 x}{2 x}
\end{aligned}
$$

$$
=3 x+2^{2}
$$


without tiles, divide each term in the polynomial by the monomial, remember the exponent law.
ex. 1

$$
\begin{aligned}
\frac{8 x^{2}+4 x}{4 x} & =\frac{8 x^{2}}{4 x}+\frac{4 x}{4 x} \\
& =2 x+1
\end{aligned}
$$

2. 

$$
\begin{aligned}
\frac{-2 x^{2}-6 x}{2} & =\frac{-2 x^{2}}{2}-\frac{6 x}{2} \\
& =-x^{2}-3 x
\end{aligned}
$$

3. 

$$
\begin{aligned}
\frac{15 x^{3}-12 x^{2}+3 x^{5}}{3 x} & =\frac{15 x^{3}}{3 x}-\frac{12 x^{2}}{3 x}+\frac{3 x^{5}}{3 x} \\
& =5 x^{2}-4 x+x^{4}
\end{aligned}
$$

4. 

$$
\begin{aligned}
\frac{6 t^{3} c-24 t c+6 t c^{2}}{-6 c} & =\frac{6 t^{3} c}{-6 c}-\frac{24 t c}{-6 c}+\frac{6 t c^{2}}{-6 c} \\
& =-t^{3}+4 t-t c
\end{aligned}
$$

5. $\left.\frac{8 m^{3} n^{2}-12 m n^{4}+4 m^{2} n^{3}}{-4 m n}=\frac{\sqrt{8} m^{3} n^{2}}{-4 m n}-\frac{12 m n^{4}+4 m m^{2} n^{3}}{-4 m n}\right]$
6. 

$$
-A=4 x^{2}-8 x+2 x \quad A=l \omega
$$

b.

$$
\begin{aligned}
& \begin{array}{ll}
A=4 x^{2}-8 x-2 x & 11 ? ? \\
l ? & \frac{A}{w}
\end{array} \quad \begin{array}{l}
A \\
l
\end{array} \\
& \frac{4 x^{2}-8 x}{2 x}=l \\
& \frac{4 x^{2}}{2 x}-\frac{8 x}{2 x}=l \\
& 2 x-4=l \\
& \text { p126\#1,3-10,12 } \quad A_{\Delta}=\frac{b h}{2}
\end{aligned}
$$

