Algebra IA/IB (H) **Name:**
Section 12.5: Dividing Polynomials **Period:** **Date:**
Homework **Score:** **/ 5 Points**

Perform the indicated operation. Simplify, if possible.

1. $(6q^2 - 18q - 9) \div 9q$

2. $\frac{2m^3n^2+56mn-4m^2n^3}{8m^3n}$

3. $(x^2 - 3x - 40) \div (x + 5)$

4. $(t^2 + 9t + 28) \div (t + 3)$

5. $(x^3 + 2x^2 - 16) \div (x - 2)$

6. $\frac{2k^3+7k^2-7}{2k+3}$

7. **ENGAGEMENT RINGS.** You want to propose to your significant other; however, you need to buy an engagement ring. Your salary (pay for 12 months) at the company you work can be modeled by the expression $20t^2 + 8000t + 40{,}000$, where t is the number of years you have been working at the company .

a) If the cost of an engagement ring should be worth about three months pay, write an expression that models the cost of the engagement ring.

b) If you've been working at the company for 5 years, about how much should the engagement ring cost? Round to the nearest dollar.

MENSA MIND TEASERS.

8. What two words that sound alike mean *AUDIBLY* and *PERMITTED?*