HW 2 – Long Division Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Determine whether each binomial is a factor of* $x^{3}+3x^{2}-10x-24$*.*

1. $x+4$ 2. $x-3$ 3. $x+6$ 4. $x+2$

*Divide using Long Division.*

5. $(x^{2}-13x-48)÷(x+3)$ 6. $(2x^{2}+x-7)÷(x-5)$

7. $(x^{3}+5x^{2}-3x-1)÷(x-1)$ 8. $(3x^{3}-x^{2}-7x+6)÷(x+2)$

9. $(6x^{3}+2x^{2}-11x+12)÷(3x+4)$ 10. $(x^{4}+2x^{3}+x-3)÷(x-1)$

11. $(2x^{4}+3x^{3}-4x^{2}+x+1)÷(2x-1)$ 12. $(x^{3}+7x^{2}+12x-3)÷(x+5)$