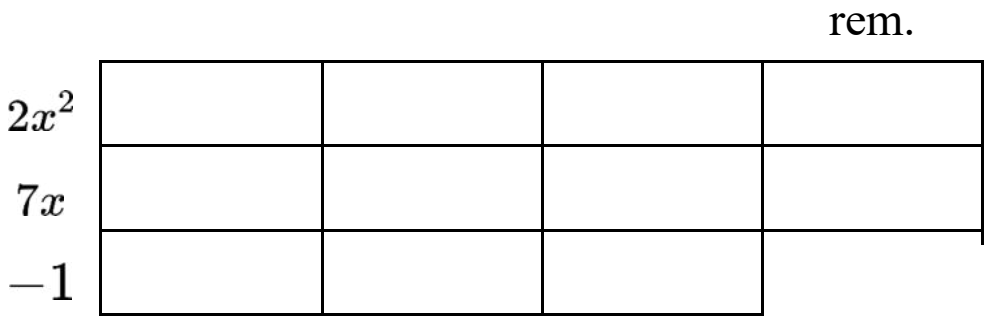
1. Divide: $\left(6x^4+27x^3+16x^2-7x+9\right)\div\left(2x^2+7x-1\right)$
   Hint: Your box should look like this. I've shown you the order for the beginning of it, to get you started.



2. Now divide $\left(2x^4-10x^3+29x^2+40\right)\div\left(x^2-2x+5\right)$

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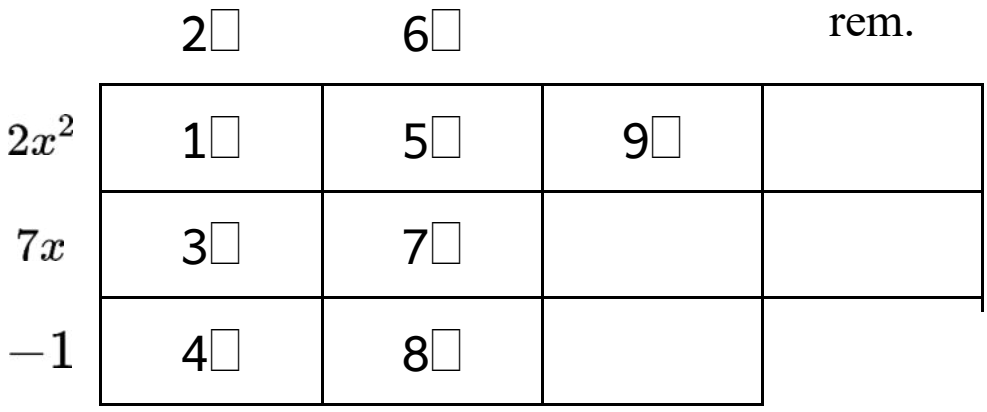

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Precalc **Name:**

Lesson 3.5 more polynomial division

1. Divide $(3x^3 - 18x^2 + 11x + 20) \div (x - 5)$. Write your answer as a multiplication equation and a division equation.

2. If $f(x) = 3x^3 - 18x^2 + 11x + 20$, find $f(5)$.

3. Divide $(2x^3 - 7x^2 - 8x + 10) \div (x - 4)$. Write your answer as a multiplication equation and a division equation.

4. If $f(x) = 2x^3 - 7x^2 - 8x + 10$, find $f(4)$.

5. Divide $(-3x^3 + 8x - 1) \div (x + 2)$. Write your answer as a multiplication equation and a division equation.

6. If $f(x) = -3x^3 + 8x - 1$, find $f(-2)$.

7. What is the remainder when you divide $(3x^3 + 5x^2 - 11) \div (x - 1)$?

8. What is the remainder when you divide $(x^3 - 6x^2 - 12x - 5) \div (x + 1)$?

More division practice!

9. $(-6x^3 + 15x^2 + 4x - 6) \div (-2x + 5)$

10. $(3x^3 - 2x - 18x^2 + 12) \div (x - 6)$

11. $(12x^4 - 10x^3 - 11x^2 - 15x + 7) \div (3x^2 + 2x + 1)$

12. $(47x^2 - 46x - 12x^3 + 16) \div (5x - 4x^2 - 2)$