Today's Plan:

Learning Target (standard): I will perform operations on polynomials.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, and prepare for a quiz.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide practice problems over operations on polynomials.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, and actively engage in practice problems.

Polynomial Practice #1-18

1) $-u^4v^2 - 8u^3v^4 + 11v^2 + 2v - 3$

2) $-8x^4 + 2x^2y^2 - 7x + 14xy^4 + 3y$

3) $13x^4y^4 - 10xy^4 + 11xy^2 + 12y^2$

4) $21u^4 + 7u^3v - 3u^2v - 14v^2$

5) $2^9 = 512$

6) $\dfrac{1}{2^3} = \dfrac{1}{8}$

7) $\dfrac{16n^{14}}{m^{13}}$

8) $\dfrac{8q^{11}r}{p^{10}}$

9) $\dfrac{y^3}{2x^9z^8}$

10) $\dfrac{m^7p^{13}}{n^{12}}$

11) $\dfrac{b^{12}}{a^{14}c^4}$

12) $\dfrac{xz^{17}}{8y^{16}}$

13) $16n^3 - 4n^2 - 70n + 49$

14) $8n^4 + 14n^3 + 35n^2 + 6n + 28$

15) $n^2 - n - 3 + \dfrac{5}{3n + 8}$

16) $2r^2 - 10r + 4 + \dfrac{6}{8r - 1}$

17) $x^2 - 2x - 3 + \dfrac{1}{x + 8}$

18) $6x^2 + 9x - 9 + \dfrac{10}{x - 5}$

Simplify.

$$zx^4y^{-1}\left(yzx^{-1}\right)^2$$

$$zx^4y^{-1} \cdot y^2z^2x^{-2}$$

$$x^2yz^3$$

Simplify.

$$\frac{\left(x^{-1}z^{-3} \cdot y^4z^{-3} \cdot 2zx^4y^{-1}\right)^3}{xzy^{-3}} = \frac{x^{-3}z^{-9} \cdot y^{12}z^{-9} \cdot 2^3z^3x^{12}y^{-3}}{xzy^{-3}}$$

$$= \frac{8x^9y^9z^{-15}}{xzy^{-3}}$$

$$= \frac{8x^9y^9y^3}{xzz^{15}}$$

$$= \frac{8x^9y^{12}}{xz^{16}}$$

$$= \frac{8x^8y^{12}}{z^{16}}$$

Simplify.

$$\frac{(2qrp^2)^3}{p^2r^{-2} \cdot 2q^{-3}r^4}$$

$$= \frac{2^3 q^3 r^3 p^6}{2 p^2 q^{-3} r^2}$$

$$= \frac{8 p^6 q^3 r^3}{2 p^2 q^{-3} r^2}$$

$$= 4 p^4 q^6 r$$

Simplify.

$$(4n^2 - 2n + 8)(3n - 2)$$

$$12n^3 - 8n^2 - 6n^2 + 4n + 24n - 16$$

$$12n^3 - 14n^2 + 28n - 16$$

Simplify.

$$(6m^2 + 3m - 1)(4m^2 - 5m - 1)$$

$$24m^4 - 30m^3 - 6m^2 + 12m^3 - 15m^2 - 3m - 4m^2 + 5m + 1$$

$$24m^4 - 18m^3 - 25m^2 + 2m + 1$$

Simplify.

$$(4n^5 + 23n^4 + 23n^3 + 14n^2 - 22n - 29) \div (4n + 3)$$

$$
\begin{array}{r}
n^4 + 5n^3 + 2n^2 + 2n - 7 \\
4n+3 \overline{\smash{)}\ 4n^5 + 23n^4 + 23n^3 + 14n^2 - 22n - 29} \\
-4n^5 \mp 3n^4 \\
\hline
20n^4 + 23n^3 \\
-20n^4 \mp 15n^3 \\
\hline
8n^3 + 14n^2 \\
-8n^3 \mp 6n^2 \\
\hline
8n^2 - 22n \\
-8n^2 \mp 6n \\
\hline
-28n - 29 \\
+28n + 21 \\
\hline
-8
\end{array}
$$

$$n^4 + 5n^3 + 2n^2 + 2n - 7 + \frac{-8}{4n+3}$$

Simplify.

$$(x^3 - x^2 - 73x - 4) \div (x + 8)$$

$$
\begin{array}{r|rrrr}
-8 & 1 & -1 & -73 & -4 \\
   &   & -8 & 72 & 8 \\
\hline
   & 1 & -9 & -1 & 4
\end{array}
$$

$$x^2 - 9x - 1 + \frac{4}{x+8}$$

Simplify.

$$(x^3 - 11x^2 + 17x + 9) \div (x - 9)$$

$$
\begin{array}{r|rrrr}
9 & 1 & -11 & 17 & 9 \\
  &   & 9 & -18 & -9 \\
\hline
  & 1 & -2 & -1 & 0
\end{array}
$$

$$x^2 - 2x - 1$$

Assignment:

p.164 #2-26 even

* skip #10 &12 *

* QUIZ tomorrow! *