Please go straight into groups. Discuss homework. We will be practicing division of polynomials today.

④ $\dfrac{6xy^2 - 3xy + 2x^2y}{xy}$

$\dfrac{6xy^2}{xy} - \dfrac{3xy}{xy} + \dfrac{2x^2y}{xy}$

$6y - 3 + 2x$

⑧ $(z^5 - 3z^2 - 20) \div (z-2)$

$z^4 + 2z^3 + 4z^2 + 5z + 10$

$z-2 \overline{)\, z^5 + 0z^4 + 0z^3 - 3z^2 + 0z - 20}$

$-(z^5 - 2z^4)$

$2z^4 + 0z^3$

$-(2z^4 - 4z^3)$

$4z^3 - 3z^2$

$-(4z^3 - 8z^2)$

$5z^2 + 0z$

$-(5z^2 - 10z)$

$10z - 20$

$-(10z - 20)$

(9)

$$x+y \;\overline{)\; x^3+0x^2y+0xy^2+y^3}$$

$$x^2 - xy + y^2$$

$$-(x^3+x^2y)$$

$$-x^2y+0xy^2$$

$$-(-x^2y-xy^2)$$

$$xy^2+y^3$$

$$-(xy^2+y^3)$$

$$0$$

$$0$$

7

$$a+1 \overline{)\ 3a^4 - 6a^3 - 2a^2 + a - 6}$$

$$3a^3 - 9a^2 + 7a - 6$$

$$-(3a^4 + 3a^3)$$

$$-9a^3 - 2a^2$$

$$-(-9a^3 - 9a^2)$$

$$7a^2 + a$$

$$-(7a^2 + 7a)$$

$$-6a - 6$$

$$-6a - 6$$

$$0$$

-11

① LONG DIVISION:

$$\frac{3x^3+2x^2-2x+11}{x+2}$$

② Synthetic:

$$\frac{3x^5+5x^4+x+5}{x+2}$$