

Grouping method
HW: Red text p. 222
#5 4-22 (2nd column)

NOV. 30

$$4.) \quad 2x^2 - 15x + 7$$
$$(2x^2 - 14x) + (-x + 7)$$
$$\begin{array}{r} 2x \\ \hline -1 \end{array}$$

$$\begin{array}{r} ac \\ 14 \\ -14 \quad -1 \\ \hline -15 \end{array}$$

$$2x(x-7) - 1(x-7)$$
$$(2x-1)(x-7)$$

$$6.) \quad 3a^2 + 4a - 4$$
$$(3a^2 + 6a) + (-2a - 4)$$
$$\begin{array}{r} 3a \\ \hline -2 \end{array}$$

$$\begin{array}{r} -12 \\ 6 \quad -2 \\ \hline 4 \end{array}$$

$$3a(a+2) - 2(a+2)$$
$$(3a-2)(a+2)$$

$$8.) \quad 3r^2 - 2r - 5$$
$$(3r^2 + 3r) + (-5r - 5)$$
$$\begin{array}{r} 3r \\ \hline -5 \end{array}$$

$$\begin{array}{r} -15 \\ -5 \quad 3 \\ \hline -2 \end{array}$$

$$3r(r+1) - 5(r+1)$$
$$(3r-5)(r+1)$$

$$10.) \quad 2p^2 + 7p + 3$$
$$(2p^2 + 6p) + (1p + 3)$$
$$\begin{array}{r} 2p \\ \hline 1 \end{array}$$

$$\begin{array}{r} 6 \\ 1 \quad 4 \\ \hline 7 \end{array}$$

$$2p(p+3) + 1(p+3)$$
$$(2p+1)(p+3)$$

$$12.) \quad 7m^2 - 9m + 2$$
$$(7m^2 - 7m) + (-2m + 2)$$
$$\begin{array}{r} 7m \\ \hline -2 \end{array}$$

$$\begin{array}{r} 14 \\ -7 \quad -7 \\ \hline -9 \end{array}$$

$$7m(m-1) - 2(m-1)$$
$$(7m-2)(m-1)$$

$$\begin{array}{l}
 14.) \quad 4c^2 + 4c - 3 \\
 \underline{(4c^2 - 2c) + (6c - 3)} \\
 \quad 2c \qquad \qquad \quad 3 \\
 2c(2c-1) + 3(2c-1) \\
 \underline{(2c+3)(2c-1)}
 \end{array}$$

$$\begin{array}{r}
 -12 \\
 6 \times -2 \\
 \hline
 4
 \end{array}$$

$$\begin{array}{l}
 16.) \quad 6a^2 - 5a - 2 \\
 \text{prime}
 \end{array}$$

$$\begin{array}{r}
 -12 \\
 -5 \\
 \hline
 \end{array}$$

$$\begin{array}{l}
 18.) \quad 9 + 6k - 8k^2 \\
 \underline{(9 - 6k) + (12k - 8k^2)} \\
 \quad 3 \qquad \qquad \quad 4k \\
 3(3-2k) + 4k(3-2k) \\
 \underline{(3+4k)(3-2k)}
 \end{array}$$

$$\begin{array}{r}
 -72 \\
 -6 \times 12 \\
 \hline
 6
 \end{array}$$

$$\begin{array}{l}
 20.) \quad 7 - 12s - 4s^2 \\
 \underline{(7 - 14s) + (2s - 4s^2)} \\
 \quad 7 \qquad \qquad \quad 2s \\
 7(1-2s) + 2s(1-2s) \\
 \underline{(7+2s)(1-2s)}
 \end{array}$$

$$\begin{array}{r}
 -28 \\
 -14 \times 2 \\
 \hline
 -12
 \end{array}$$

$$\begin{array}{l}
 22.) \quad 2p^2 - 7pq + 6q^2 \\
 \underline{(2p^2 - 4pq) + (-3pq + 6q^2)} \\
 \quad 2p \qquad \qquad \quad -3q \\
 2p(p-2q) - 3q(p-2q) \\
 \underline{(2p-3q)(p-2q)}
 \end{array}$$

$$\begin{array}{r}
 12 \\
 -4 \times -3 \\
 \hline
 -7
 \end{array}$$