

8-6 Practice Form G

#1 Rule : Factor out GCF

Factor each expression.

1. $2w^2 + 13w + 15$

$$= (2w + 3)(w + 5)$$

$\begin{array}{c} +3w \\ +10w \end{array}$

2. $3d^2 + 20d + 12$

$$(3d + 2)(d + 6)$$

$\begin{array}{c} +2d \\ +18d \end{array}$

3. $4n^2 + 62n - 32$ GCF = 2

$$= 2(2n^2 + 31n - 16)$$

$$= 2(2n - 1)(n + 16)$$

$\begin{array}{c} -1n \\ +32n \end{array}$

4. $3p^2 - 7p - 40$

$$= (3p + 8)(p - 5)$$

$\begin{array}{c} +8p \\ -15p \end{array}$

5. $6r^2 - 10r - 24$ GCF = 2

$$= 2(3r^2 - 5r - 12)$$

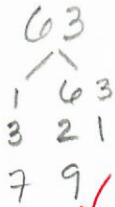
$$= 2(3r + 4)(r - 3)$$

$\begin{array}{c} +4r \\ -9r \end{array}$

6. $5z^2 - 17z + 14$

$$(5z - 7)(z - 2)$$

$\begin{array}{c} -7z \\ -10z \end{array}$



7. $14k^2 - 67k + 63$

$$= (7k - 9)(2k - 7)$$

$\begin{array}{c} -14k \\ -49k \end{array}$

8. $2m^2 - m - 15$

$$= (2m + 5)(m - 3)$$

$\begin{array}{c} +5m \\ -6m \end{array}$

9. $3x^2 + 9x - 84$ GCF = 3

$$= 3(x^2 + 3x - 28)$$

$$= 3(x + 7)(x - 4)$$

$\begin{array}{c} +7x \\ -4x \end{array}$

10. $6x^2 - 10x - 4$ GCF = 2

$$= 2(3x^2 - 5x - 2)$$

$$= 2(3x + 1)(x - 2)$$

$\begin{array}{c} +1x \\ -6x \end{array}$

11. $6d^2 + 21d + 15$ GCF = 3

$$= 3(2d^2 + 7d + 5)$$

$$= 3(2d + 5)(d + 1)$$

$\begin{array}{c} +5d \\ +2d \end{array}$

12. $8n^2 + 68n + 84$ GCF = 4

$$= 4(2n^2 + 17n + 21)$$

$$= 4(2n - 3)(n - 7)$$

$\begin{array}{c} -3n \\ -14n \end{array}$