

[7 I]

WRITTEN EXERCISES

Factor completely over the integers.

3. $6x^2 - 21x - 12$

6. $18a^2 + 21a - 9$

9. $3b^2 - 3b$

12. $6z^3 - 3z^2 - 30z$

15. $12m^2 + 33m - 9$

18. $4x^2 - 32x + 60$

21. $2t^2 - 28t + 98$

24. $5x^2 + 60x - 140$

27. $st^2 - st - 20s$

30. $x^2 - 6x + 9$

33. $ab^2 - ab - 72a$

36. $2a^2 - 5a + 3$

39. $2x^2 - 14x + 24$

42. $5a^2 - 80$

45. $1 - 4y^2$

48. $2 - 2y^2$

12. $3x^2 + 11x + 10$

15. $6y^2 - 17y + 12$

18. $9x^2 + 6x - 8$

21. $3y^2 + 4y - 7$

24. $12y^2 + 7y + 1$

27. $3a^2 - 10a - 25$

30. $3z^2 + 13z - 10$

33. $5q^2 - 42q - 27$

36. $14x^2 - 57xy - 27y^2$

39. $2x^2 + 7x + 6$

42. $56x^2 + 15x - 56$

45. $64a^2 + 112ab + 49b^2$

[7I] Using Several Methods to Factor

- Factor GCF
- Look Difference of Perfect Squares $x^2 - 4$
 $(x+2)(x-2)$
- Look Perfect Sq. Trinomials $x^2 - 12x + 36$
 $(x-6)(x-6)$

$$\begin{aligned} \textcircled{1} \quad & 3x^2 - 27x + 60 \\ & 3(x^2 - 9x + 20) \\ & 3(x-5)(x-4) \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & 10x^2 - 50x - 140 \\ & 10(x^2 - 5x - 14) \\ & 10(x-7)(x+2) \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & 4a^4 - 49 \\ & (2a^2 + 7)(2a^2 - 7) \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & 16x^2 + 24x + 9 \\ & (4x + 3)(4x + 3) \end{aligned}$$

12x