KEY

Chapter 8 Review #2

Factor each expression completely.

1. $g^2 - 5g - 14$ $= (g-7)(g+2)$

2. $2n^2 + 3n - 2$ $= (2n-1)(n+2)$

3. $6k^2 - 10k + 4$ $= 2(3k-2)(k-1)$
   $= 2(3k^2 - 5k + 2)$

4. $6m^2 + 25m + 11$ $= (3m+11)(2m+1)$

5. $2g^2 - 35g + 17$ $= (2g-1)(g-17)$

6. $3x^2 + 3x - 6$ $= 3(x+2)(x-1)$

7. $21p^2 - 70p + 49$ $= 7(3p-7)(p-1)$
   $7(3p^2 - 10p + 7)$

8. $-2k^2 + 4k + 70$ $= -2(k-7)(k+5)$
   $-2(k^2 - 2k - 35)$

9. $10v^2 + 11v - 8$ $= (2v-1)(5v+8)$

10. $5h^2 + 15h + 10$ $= 5(h+2)(h+1)$
    $5(h^2 + 3h + 2)$

11. $5c^2 - 20c + 100$

$= 5(c^2 - 12c + 20)$

$= 5(c - 10)(c - 2)$

12. $r^2 - 64 = (r+8)(r-8)$

13. $9z^2 - 16 = (3z+4)(3z-4)$

14. $25m^2 + 80m + 64 = (5m+8)^2$

15. $49n^2 - 4 = (7n-2)(7n+2)$

16. $32v^2 - 8 = 8(2v+1)(2v-1)$

17. $11b^3 - 6b^2 + 11b - 6$

$(b^2+1)(11b-6)$

18. $45z^3 + 20z^2 - 9z - 4$

$(9z+4)(5z-1)$

19. $9a^3 - 12a^2 - 18a + 24$

$3(3a^3 - 4a^2 - 6a + 8)$

$= 3(3a-4)(3a^2-2)$

20. A square end table has an area of $9n^2 + 54n + 81$. What expression represents the length of each side?

$3(n+3)$ or $3n+9$