U2L5 WKST

Practice

Expand.

1. $x(x+2)$
2. $x(x-3)$
3. $a(a+1)$
4. $t(t-1)$
5. $y(y+4)$
6. $m(m+5)$
7. $x(x-5)$
8. $y(y-7)$
9. $a(a-10)$

Expand.

10. $3x(x+2)$
11. $4b(b-11)$
12. $5t(t+3)$
13. $2x(3+x)$
14. $7y(y-5)$
15. $-2x(x+4)$
16. $-x(x+2)$
17. $-y(y-3)$

Expand and simplify.

18. $x(x+3)-x(x-2)$
19. $y(2+y)+y(y-1)$
20. $m(m-1)+m(m-1)$
21. $x(x+2)-(2x-2)$
22. $y(y-4)-y(3-2y)$
23. $a(2a-1)+a(a+1)$
24. $x(x-2)-x(x+1)$

Expand and simplify.

25. $3x(x+2)+2x(x+5)$
26. $2x(x-3)-x(x-5)$
27. $3x(2x+1)+x(3x+2)$
28. $-2y(y-3)-y(y+1)$
29. $2a(a+3)+3a(a-2)$
30. $-x(3x-4)-2x(1-x)$
31. $4x(x+2)+2x(7-2x)$

Expand.

32. $x(x^2+2x+3)$
33. $3(x^2+2x-5)$
34. $5x(x^2+2x-7)$
35. $-(x^2-3x-1)$
36. $4m(m^2-5m+6)$
37. $3y(2y^2-4y+3)$
38. $-3b(3b^2-5b+1)$
39. $-5z(z^2-2z-5)$

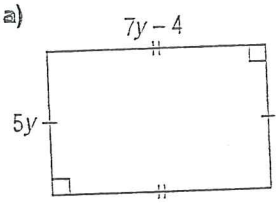
Problems and Applications

Expand and simplify.

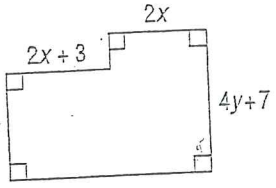
40. $3(x^2+2x-5)-x(x+1)$
41. $5(x^2+2x-7)+3x(x+1)$
42. $-(x^2-3x-1)+x(3x+2)$
43. $4(2x+3)+3x(x^2-x+3)$
44. $3m(m-2)+4(m^2-5m+6)$
45. $5y(1-y)+3(2y^2-4y+3)$
46. $-3x(x+2)+2x(2x-1)$

47. Write, expand, and simplify an expression for the area of each figure.

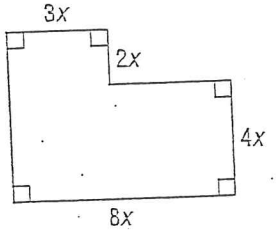
a)



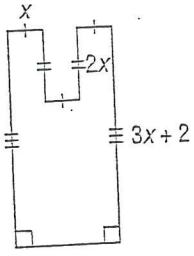
b)



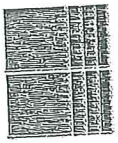
c)



d)



48. Explain why the area of the algebra tiles models the product $2x(x+3)$.



49. Use algebra tiles to model each of the following products. Expand each expression to check that the model is correct.
a) $4x(x+1)$ b) $x(3x+2)$ c) $2x(2x+1)$

50. Write a problem similar to those in question 47. Have a classmate solve your problem.