

Simplify each expression.

1.  $-13(4+y)$

2.  $8(3p^2+10p-15)$

3.  $-t(9t-2)$

4.  $-k(20-14k-6k^2)$

5.  $c^2(c-8)$

6.  $-10w^2(3w+w^2)$

7.  $(b+5)(b+11)$

8.  $(r-6)(r-8)$

9.  $(v-1)(v+7)$

10.  $(2a+16)(-a-10)$

11.  $(1-6g)(3+g)$

12.  $(s^2+5)(s-8)$

13.  $(z+2)(z^2-4z-13)$

14.  $(3x-5)(x^2+6x-20)$

15.  $(y+8)(2y^2-14y+9)$

16.  $(m+1)^2$

17.  $(4n-7)^2$

18.  $(2x-3)^3$

19. What two numbers have a product of 36 and a sum of 13?
20. What two numbers have a product of 44 and a sum of 24?
21. What two numbers have a product of 25 and a sum of 26?
22. What two numbers have a product of 51 and a difference of 14?
23. What two numbers have a product of 72 and a difference of 6?
24. What two numbers have a product of 12 and a difference of 1?