

Student Name: _____

Score: _____

DOTS

Factorize Using Formula

$$a^2 - b^2 = (a + b)(a - b)$$

Problems

Work Space

$x^2 - 9$ Answer:	$(x + 3)(x - 3)$
$36m^2 - 25n^2$ $\overset{6}{\underset{6}{\wedge}} \quad \overset{5}{\underset{5}{\wedge}}$ Answer:	$(6m + 5n)(6m - 5n)$
$s^2 - 1$ Answer:	$(s + 1)(s - 1)$
$81 - z^2$ Answer:	$(9 + z)(9 - z)$
$64a^2b^2 - 49c^2d^2$ Answer:	$(8ab + 7cd)(8ab - 7cd)$
$121p^2 - 9q^2$ Answer:	$(11p - 3q)(11p + 3q)$

Factoring the Difference of Squares

Factor each completely.

1) $a^2 - 49$ $(a+7)(a-7)$

2) $a^2 - 64$ $(a+8)(a-8)$

3) $p^2 - 144$ $(p+12)(p-12)$

4) $b^2 - 25$ $(b+5)(b-5)$

5) $x^2 - 9$ $(x+3)(x-3)$

6) $x^2 - 4$ $(x+2)(x-2)$

7) $k^2 - 121$ $(k+11)(k-11)$

8) $k^2 - 36$ $(k+6)(k-6)$

9) $n^2 - 289$ $(n+17)(n-17)$

10) $n^2 - 169$ $(n+13)(n-13)$

11) $4x^2 - 25$ $(2x+5)(2x-5)$

12) $\sqrt{16}b^2 - 1$ $(4b+1)(4b-1)$

13) $9a^2 - 4$ $(3a+2)(3a-2)$

14) $n^2 - 16$ $(n-4)(n+4)$

15) $9b^2 - 25$ $(3b+5)(3b-5)$

16) $1 - a^2$ $(1+a)(1-a)$

17) $16r^2 - 25$ $(4r-5)(4r+5)$

18) $m^2 - 9$ $(m+3)(m-3)$

19) $25m^2 - 9$ $(5m+3)(5m-3)$

20) $16v^2 - 9$ $(4v+3)(4v-3)$

21) $y^2 - x^2$ $(y+x)(y-x)$

22) $121y^2 - 36x^2$ $(11y+6x)(11y-6x)$

23) $9u^2 - 4v^2$ $(3u+2v)(3u-2v)$

24) $64a^2 - 25b^2$ $(8a+5b)(8a-5b)$

25) $144x^2 - 25y^2$ $(12x+5y)(12x-5y)$

26) $25u^2 - v^2$ $(5u-v)(5u+v)$

27) $121x^2 - 9y^2$ $(11x+3y)(11x-3y)$

28) $49x^2 - 4y^2$ $(7x+2y)(7x-2y)$

29) $81x^2 - 121y^2$ $(9x-11y)(9x+11y)$

30) $36x^2 - y^2$ $(6x+y)(6x-y)$