

Topic: Polynomials

Factoring using Sum/Product and Difference of Squares

el 3

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Watch (and take notes) the lecture called Factoring using Difference of Squares.

1. Factor each polynomial. (Choose 6 to complete. Do the rest for more practice).

a. $9x^2 - 1$

$(3x+1)(3x-1)$

b. $4n^2 - 49$

$(2n+7)(2n-7)$

c. $36k^2 - 1$

$(6k+1)(6k-1)$

d. $p^2 - 36$

$(p+6)(p-6)$

e. $196n^2 - 144$

$(14n+12)(14n-12)$

f. $a^2 - 25b^2$

$(a+5b)(a-5b)$

g. $4x^2 + 49y^2$

$(2x+7i)(2x-7i)$ *cant factor*

h. $25x^2 + 16y^2$ *(plus sign)*

$(5x+4iy)(5x-4iy)$ *cant factor*

i. $x^2 - 9y^2$

$(x+3y)(x-3y)$

j. $49x^2 - 25y^2$

$(7x+5y)(7x-5y)$

k. $9x^2 - 16y^2$

$(3x+4y)(3x-4y)$

l. $36a^4 - 25b^4$

$(6a^2+5b^2)(6a^2-5b^2)$

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2. Factor each polynomial. (Choose 10 to complete. Do the rest for more practice).

a. $b^2 + 8b + 7$

$(b+1)(b+7)$

b. $n^2 - 11n + 10$

$(n-10)(n-1)$

c. $m^2 + m - 90$

$(m-9)(m+10)$

d. $n^2 + 4n - 12$

$(n-2)(n+6)$

e. $n^2 - 10n + 9$

$(n-9)(n-1)$

f. $b^2 + 16b + 64$

$(b+8)(b+8)$

g. $m^2 + 2m - 24$

$(m-4)(m+6)$

h. $x^2 - 4x + 24$

$(x-4)(x+6)$ *cant factor*

i. $k^2 - 13k + 40$

$(k-5)(k-8)$

j. $a^2 + 11a + 18$

$(a+2)(a+9)$

k. $n^2 - n - 56$

$(n+7)(n-8)$

l. $n^2 - 5n + 6$

$(n-2)(n-3)$

m. $b^2 - 6b + 8$

$(b-2)(b-4)$

n. $n^2 + 6n + 8$

$(n+2)(n+4)$

o. $a^2 - a - 90$

$(a+9)(a-10)$

p. $p^2 + 11p + 10$

$(p+1)(p+10)$

q. $x^2 - 15x + 50$

$(x-5)(x-10)$

r. $v^2 - 7v + 10$

$(v-2)(v-5)$