

Grade 10 FMP Unit 3 Skill #3

Partial Solutions

A: Factoring Review

$36x + 24 = 12(3x + 2)$	$12x + 8 = 4(\quad)$
$-27x - 54 = -27(\quad)$	$-45x - 35 = -5(\quad)$
$18x + 9 = 9(\quad)$	$-16x - 12 = -4(\quad)$
$-12x + 12 = -12(\quad)$	$-25x + 45 = -5(\quad)$

B: Factoring with one exponent

$20x^5 + 4x = 4x(\quad)$	$10x^4 - 2x = 2x(\quad)$
$5x^5 + 15x^2 = 5x^2(\quad)$	$70x^5 + 10x^2 = 10x^2(\quad)$
$9x^5 + 9x^2 = 9x^2(x^3 + 1)$	$-5x^3 + 15x = -5x(\quad)$
$72x^5 + 9x^4 = 9x^4(\quad)$	$10x^4 + 50x = 10x(\quad)$
$30x^5 + 3x^3 = 3x^3(\quad)$	$9x^4 - 90x^3 = 9x^3(\quad)$

C: Factoring with two exponents

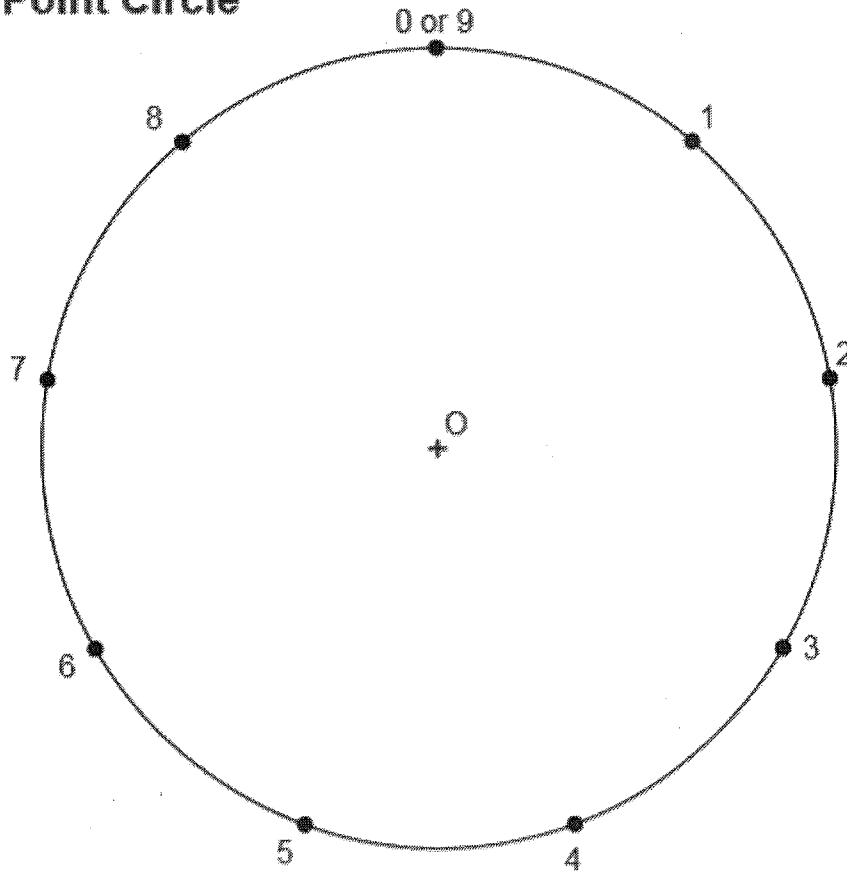
$-6a^3b^4 - 54a^3b^2 = -6a^3b^2(b^2 + 9)$	$10a^2b + 80b^4 = 10b(\quad)$
$-3a^5b - 21ab = -3ab(\quad)$	$3a^5b^2 + 12ab^4 = 3ab^2(\quad)$
$6a^5b^5 + 54a^3 = 6a^3(\quad)$	$-8a^4b^4 - 48ab^3 = -8ab^3(\quad)$
$-70a^5b^5 - 10a^4b^3 = -10a^4b^3(\quad)$	$-8a^5b^2 + 48a^5b = -8a^5b(\quad)$
$4a^5b^5 - 32ab^3 = 4ab^3(\quad)$	$24a^4b^4 + 6a^3b^5 = 6a^3b^4(\quad)$

D: Factoring with three exponents

$-7x^5y^3z^2 + 70x^3y^2z = -7x^3y^2z ($	$)$
$28x^3y^3z^3 - 7xy^3z^3 = -7xy^3z^2 ($	$)$
$16x^5y^4z^4 - 4x^4y^3z^4 = 4x^4y^3z^4 ($	$)$
$10x^3y^3z + 90x^3yz^5 = 10x^3yz ($	$)$
$x^2yz^5 - 10xyz = xyz (xz^3 - 10y^4)$	

9 point star: join every fourth point until you return to the starting point (use a ruler)

9 Point Circle



Grade 10 FMP Unit 3 Skill #3

Complete
Solutions

A: Factoring Review

$36x + 24 = 12(3x + 2)$	$12x + 8 = 4(3x + 2)$
$-27x - 54 = -27(x + 2)$	$-45x - 35 = -5(9x + 7)$
$18x + 9 = 9(2x + 1)$	$-16x - 12 = -4(4x + 3)$
$-12x + 12 = -12(x - 1)$	$-25x + 45 = -5(5x - 9)$

B: Factoring with one exponent

$20x^5 + 4x = 4x(5x^4 + 1)$	$10x^4 - 2x = 2x(5x^3 - 1)$
$5x^5 + 15x^3 = 5x^2(x^3 + 3)$	$70x^6 + 10x^2 = 10x^2(7x^3 + 1)$
$9x^5 + 9x^3 = 9x^2(x^3 + 1)$	$-5x^3 + 15x = -5x(x - 3)$
$72x^6 + 9x^4 = 9x^4(8x^2 + 1)$	$10x^4 + 50x = 10x(x^3 + 5)$
$30x^5 + 3x^3 = 3x^3(10x^2 + 1)$	$9x^4 - 90x^3 = 9x^3(x - 10)$

C: Factoring with two exponents

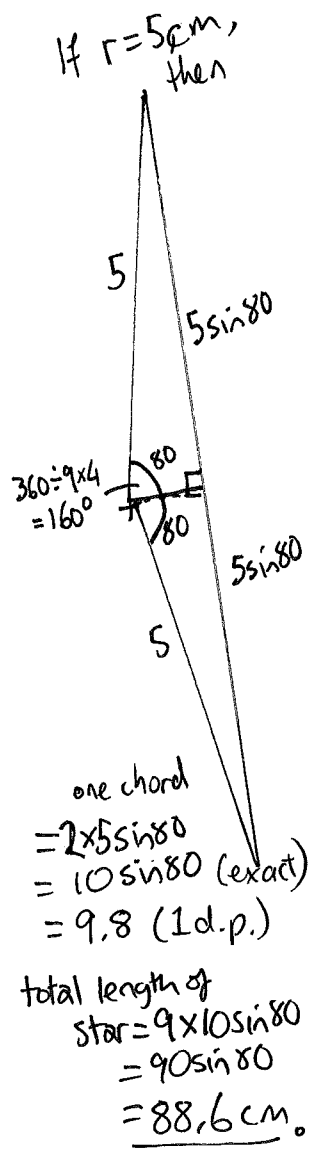
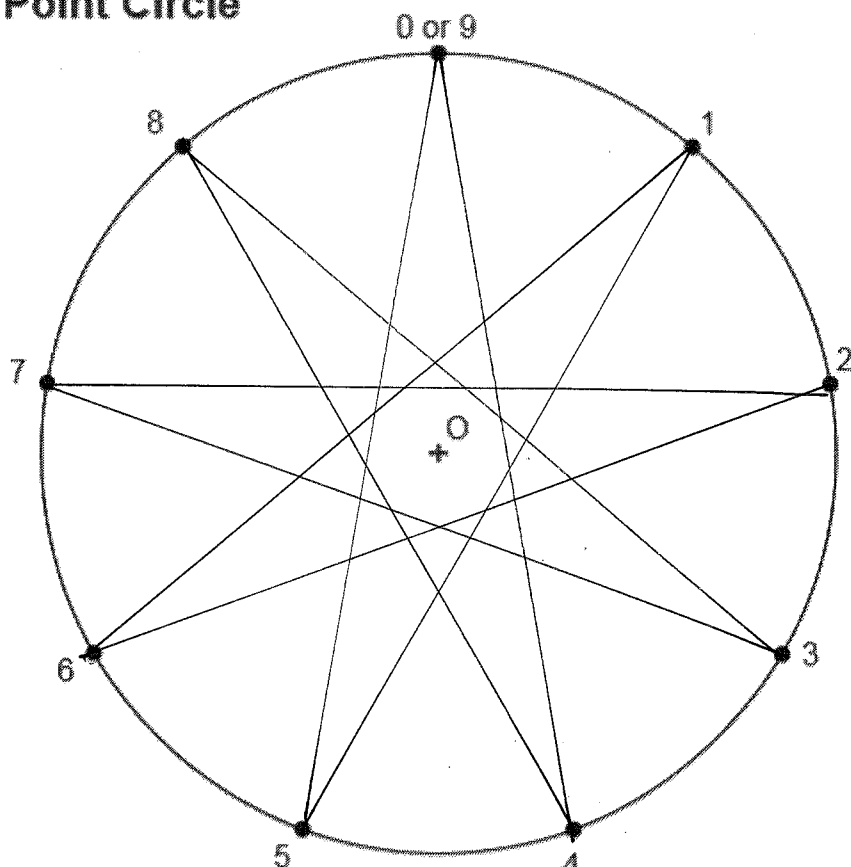
$-6a^3b^4 - 54a^3b^2 = -6a^3b^2(b^2 + 9)$	$10a^2b + 80b^4 = 10b(a^2 + 8b^3)$
$-3a^3b - 21ab = -3ab(a^2 + 7)$	$3a^5b^2 + 12ab^4 = 3ab^2(a^4 + 4b^2)$
$6a^5b^5 + 54a^3 = 6a^3(a^2b^5 + 9)$	$-8a^4b^4 - 48ab^3 = -8ab^3(a^3b + b)$
$-70a^5b^5 - 10a^4b^3 = -10a^4b^3(7ab^2 + 1)$	$-8a^5b^2 + 48a^5b = -8a^5b(b - 6)$
$4a^5b^5 - 32ab^3 = 4ab^3(a^4b^2 - 8)$	$24a^4b^4 + 6a^3b^5 = 6a^3b^4(4a + b)$

D: Factoring with three exponents

$-7x^5y^3z^2 + 70x^3y^2z = -7x^3y^2z(x^2yz - 10)$
$28x^3y^3z^2 - 7xy^3z^2 = -7xy^3z^2(4x^2 + z)$
$16x^5y^4z^4 - 4x^4y^5z^4 = 4x^4y^4z^4(4x - y)$
$10x^3y^3z + 90x^3yz^5 = 10x^3yz(y^2 + 9z^4)$
$x^2yz^5 - 10xyz = xyz(xz^4 - 10y^4)$

9 point star: join every fourth point until you return to the starting point (use a ruler)

9 Point Circle



sequence: 0, 4, 8, 3, 7, 2, 6, 1, 5, 9
 in base 10: 0, 4, 8, 12, 16, 20, 24, 28, 32, 36
 in base 9: 0, 4, 8, 13, 17, 22, 26, 31, 35, 40 ... why?