Quiz 5.6

Factor each polynomial completely.

1. (2 points) $25x^2 - y^2$

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

2. (2 points) $x^2 - 4x + 4 - y^2$

x^2-4x+4

$(x-2)(x-2)$

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

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

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

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

3. (3 points) $3y^3 + 24$

$3(y^3+8)$

$3(y+2)(y^2-2y+4)$

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5.7 Factoring: A general Stratagy

Steps for factoring can be found on page 417 in your book

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Factor

$8x^2 - 16x - 42$

$2(4x^2-8x-21)$

$4x^2-14x+6x-21$

$2x(2x-7)+3(2x-7)$

$2(2x-7)(2x+3)$

-84

$3 \quad -28$

$-14 \quad 6$

$4x \quad 4x$

$-7 \quad 3$

$2x \quad 2x$

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Factor

$9p^2 - 25q^2$

$(3p-5q)(3p+5q)$

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Factor

$16x^2+112xy+196y^2$

$4(4x^2+28xy+49y^2)$

$4(2x+7y)^2$

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Factor

$8m^3+27n^6$

$(2m+3n^2)(4m^2-6mn^2+9n^4)$

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Factor

$-4xy^2+12xy+132x$

$-4x(y^2-3y-33)$

-33

$-11 \quad 3$

$11 \quad -3$

$1 \rightarrow 33$

$-1 \rightarrow -33$

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Factor

$6x^3-4x^2-24x+16$

$2(3x^3-2x^2-12x+8)$

$x^2(3x-2)-4(3x-2)$

$2(3x-2)(x^2-4)$

$2(3x-2)(x-2)(x+2)$

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Factor

$x^2 - 6xy + 9y^2 - 25$

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

$(x-3y)^2 - 25$

$((x-3y)-5)((x-3y)+5)$

$(x-3y-5)(x-3y+5)$

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You try

$p^2 - 16pq + 64q^2$

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You try

$2x^3 + 5x^2 + 4x + 10$

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You try

$64y^3 - 125$

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You try

$2p^2q - 8pq^2 - 90q^3$

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You try

$4x^2 4xy + y^2 - 81$

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You try

$8x^2 + 72y^2$

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You try

$10z^2 - 15z + 35$

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You try

$81x^2 - 100y^2$

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Sep 26-7:51 PM