# Algebra I
## 4-3
## Multiplying Monomials

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Contrast

When Multiplying: $( 4x^2y )( 7xy^2 ) = 28x^3y^3$

1) Like terms not needed
2) multiply coefficients
3) Add powers

When Adding: $4x^2y + 7x^2y = 11x^2y$

1) Like terms required
2) Coefficients are added
3) powers DoNoT change.

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Simplify. (pg 153)

1) $n^3 \cdot n^5$

$n^8$

13) $( -3xy^3 )( -2x^3y )$

$6x^4y^4$

23) $\dfrac{15a^3b}{1} \cdot \dfrac{8ab^2}{10} = \dfrac{12a^4b^3}{2} = 6a^4b^3$
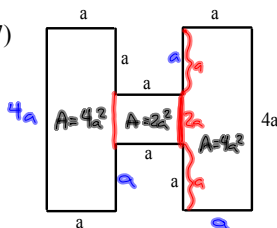
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Simplify.

31) $( 5x^2 )( 2x^3 ) + ( 3x )( 4x^4 )$

$10x^5 + 12x^5$

$\boxed{22x^5}$

$22x^5$
$22x^8$
$22x^{10}$
$22x^7$
$17x^5$

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Find the perimeter and area.

37)

$P = 5a + 4a + 5a + 4a$

$= 18a$

Area of rectangle
$A = \ell \cdot w$

$A = 4a^2$   $A = 2a^2$   $A = 4a^2$

$4a$

Area $= 4a^2 + 2a^2 + 4a^2 = \boxed{10a^2}$

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Simplify.

41) $a^m \cdot a^m$

$a^{m+m}$

$a^{2m}$

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2-36 even
42-52 even