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| \*Learning Target: |
| \*Critical Content: |

To find the product of a polynomial and a monomial, we just use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**\***We still ALWAYS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Simplify the following**Ex1) $-3x^{2}(7x^{2}-x+4)$ Ex2) $2p\left(-4p^{2}+5p\right)-5(2p^{2}+20)$

Ex3) At a dance, a trapezoid piece of poser board is being constructed with metallic gold paper. If the height of the board is 18 inches, how much metallic paper is needed? \*Hint: Area of a trapezoid = $\frac{1}{2}h(b\_{1}+b\_{2})$



Ex4) Solve $2a\left(5a-2\right)+3a\left(2a+6\right)+8=a\left(4a+1\right)+2a\left(6a-4\right)+50$

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| **Find each product.** |
| 1) $b(b^{2}-12b+1)$ | 2) $-3m^{3}(2m^{3}-12m^{2}+2m+25)$ | 3) $2pr^{2}(2pr+5p^{2}r-15p)$ |
| **Simplify.** |
| 4) $-3\left(5x^{2}+2x+9\right)+x(2x-3)$ | 5) $-4d\left(5d^{2}-12\right)+7(d+5)$ |
| 6) $2j\left(7j^{2}k^{2}+jk^{2}+5k\right)-9k(-2j^{2}k^{2}+2k^{2}+3j)$ | 7) $4n\left(2n^{3}p^{2}-2np^{2}+5n\right)+4p\left(6n^{2}p-2np^{2}+3p\right)$ |
| **Solve.** |
| 8) $w\left(4w+6\right)+2w=2(2w^{2}+7w-3)$ | 9) $9c\left(c-11\right)+10\left(5c-3\right)=3c\left(c+5\right)+c\left(6c-3\right)-30$ |
| 10) $2k\left(-3k+4\right)+6\left(k^{2}+10\right)=k\left(4k+8\right)-2k(2k+5)$ |
| **Simplify.** |
| 11) $\frac{3}{5}r^{2}t(10r^{3}+5rt^{3}+15t^{2})$ | 12) $-x^{2}z\left(2z^{2}+4xz^{3}\right)+xz^{2}\left(xz+5x^{3}z\right)+x^{2}z^{3}(3x^{2}z+4xz)$ |