Powers of Monomials

~~$(5x^3)^2 = 10x^6$~~

$(5x^3)^2 = 25x^6$

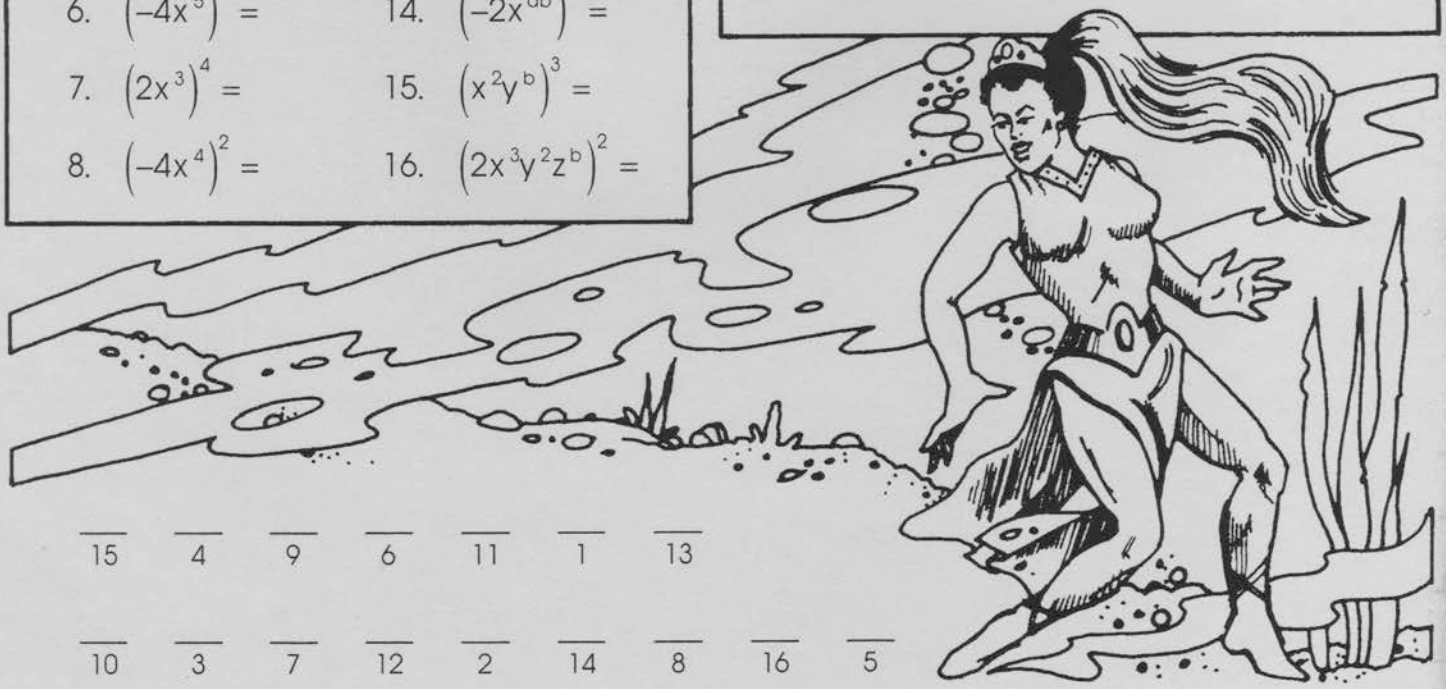
Tip

When taking a power of a monomial, be very careful. Do not multiply the exponent by the coefficient; raise the coefficient to the power of the exponent. For the variable, multiply the exponents.

Simplify the following monomials. Use the code to discover who was Time magazine's first Man of the Year in 1927.

1. $(x^3)^2 =$
2. $(x^7)^4 =$
3. $(5x)^3 =$
4. $\left(\frac{1}{3}xy\right)^2 =$
5. $(3x^2)^2 =$
6. $(-4x^5)^2 =$
7. $(2x^3)^4 =$
8. $(-4x^4)^2 =$
9. $(x^a)^2 =$
10. $(-x^{3a})^3 =$
11. $(-3x^2y)^4 =$
12. $(2x^ay^{2b})^3 =$
13. $(3x^{a+1})^2 =$
14. $(-2x^{ab})^3 =$
15. $(x^2y^b)^3 =$
16. $(2x^3y^2z^b)^2 =$

R	$16x^{10}$	H	$\frac{1}{9}x^2y^2$
R	$16x^8$	L	$81x^8y^4$
E	x^6	I	$125x^3$
D	$8x^{3a}y^{6b}$	L	$-x^{9a}$
E	$-8x^{3ab}$	A	x^{2a}
B	x^{28}	C	x^6y^{3b}
S	$9x^{2a+2}$	N	$16x^{12}$
H	$9x^4$	G	$4x^6y^4z^{2b}$



15	4	9	6	11	1	13		
10	3	7	12	2	14	8	16	5