

Name:

Date:

Period:

Use the Distributive Property. Be sure to combine "like" terms to simplify when possible.

1. $5(r - 7)$	2. $-5x(x^2 - 2x + 4)$	3. $12\left(\frac{2}{3}m - 4n\right)$	4. $8(3x - 2y + 4z)$
5. $-3a^2b^2(4ab^2 - 3b^2)$	6. $3xy(x^2 + xy + y^2)$	7. $3x + 7(2x + 3)$	8. $3(x + 5) - 10$
9. $-2(3 - 2x^2) - (6 - 5x)$	10. $7x(x + 3y) - 4y(-4x - y)$	11. $4a(a - 2b) + 6b(2a - b)$	12. $2s + 3s(6 - 4t) + 12st$

Use Double Distributive to multiply the two binomials. Simplify your answer.

Example 1:

$(x + 2)(x - 8)$

Be sure to line up "like" terms to combine

$$\begin{array}{r} x^2 - 8x - 16 \\ + 2x \\ \hline x^2 - 6x - 16 \end{array}$$

Example 2:

Write it out first

$(x - 5)^2$
 $(x - 5)(x - 5)$

Be sure to line up "like" terms to combine

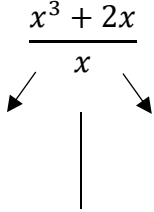
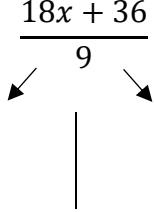
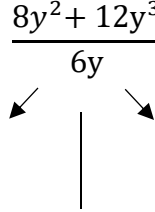
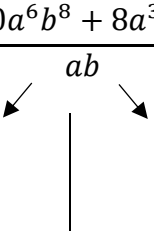
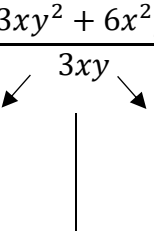
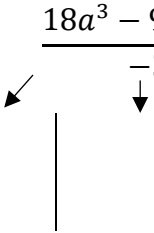
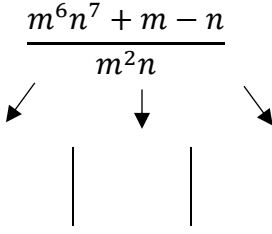
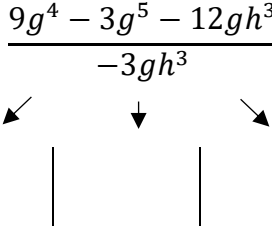
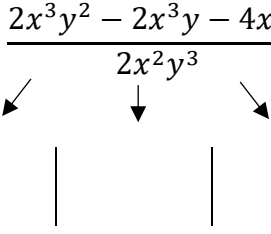
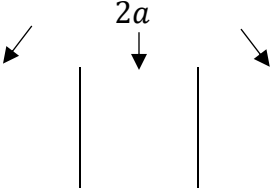
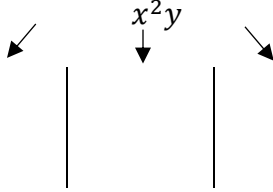
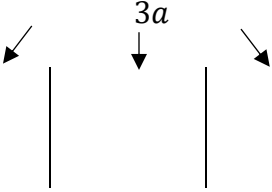
$$\begin{array}{r} x^2 - 5x + 25 \\ - 5x \\ \hline x^2 - 10x + 25 \end{array}$$

13. $(x + 5)(x + 3)$	14. $(y + 9)(y + 2)$	15. $(x - 10)(x - 5)$
16. $(y - 1)(y - 9)$	17. $(x + 7)(x - 2)$	18. $(y + 11)(y - 4)$
19. $(6 + d)(3 + d)$	20. $(m - 6)(3m + 2)$	21. $(y + 8)^2$
22. $(a + 4)(a - 4)$	23. $(x + 2y)(x - 2y)$	24. $(p - 4)^2$

Divide the following monomials. Make sure you leave no negative exponents.

1. $\frac{a^3}{a^5}$	2. $\frac{x^4y^2}{2x^2}$	3. $\frac{12c^2d^4}{3c^2d^3}$
4. $\frac{10a^6b^8}{40a^2b^2}$	5. $\frac{14a^2b^2}{28ab}$	6. $\frac{-35x^9y^{10}z^5}{15x^9y^8z^3}$
7. $\frac{5x^3y^2z^8}{5x^5y^6z^2}$	8. $\frac{6a^3b^4c}{12a^7b^3c^3}$	9. $\frac{-36p^8q^6}{18p^{10}q^3}$

Divide the following by separating and dividing each piece separately. Make sure you leave no negative exponents and include SIGNS in your answer.

10. $\frac{x^3 + 2x}{x}$ 	11. $\frac{18x + 36}{9}$ 	12. $\frac{8y^2 + 12y^3}{6y}$ 
Final Answer:	Final Answer:	Final Answer:
13. $\frac{10a^6b^8 + 8a^3b^5}{ab}$ 	14. $\frac{3xy^2 + 6x^2y}{3xy}$ 	15. $\frac{18a^3 - 9a^2 - 3a}{-3a}$ 
Final Answer:	Final Answer:	Final Answer:
16. $\frac{m^6n^7 + m - n}{m^2n}$ 	17. $\frac{9g^4 - 3g^5 - 12gh^3}{-3gh^3}$ 	18. $\frac{2x^3y^2 - 2x^3y - 4xy^3}{2x^2y^3}$ 
Final Answer:	Final Answer:	Final Answer:
19. $\frac{12a^2 - 2a + 12}{2a}$ 	20. $\frac{3x^4y^5 + 12x^2y^3 - 18x^2}{x^2y}$ 	21. $\frac{9a^8 + 3a + 3}{3a}$ 
Final Answer:	Final Answer:	Final Answer: