Math 002 Worksheet: Rules of Exponents & Polynomial Multiplication

(1-6) Simplify using rules of exponents. Write each answer using only positive exponents

1) $\left(\frac{3x^2y^5z^4}{xy^2z^4}\right)^2$

2) $\left(\frac{49x^3y^5z^4}{7xy^4z^7}\right)^{-3}$

3) $\left(\frac{32a^4b^9c^4}{16a^5b^3c^4}\right)^{-4}$

4) $\left(\frac{3x^4}{9x^2}\right)^{-2} \cdot \frac{(2x^4)^2}{4x^3}$

5) $(-5x^2y^3z)^0$

6) $-5x^2y^3z^0$

(7-9) Evaluate

7) $5^{-2} + 1^{25} + 1{,}234^{\,0}$

8) $3 + 2x^0 + 5^{-2}$

9) $1 + 2^{-2} + 3^{-2}$

(10-16) Multiply

10) $(-3x^2y)(-2x^3y^4)$

11) $(3x^2y^3z^4)^2 \cdot (2xy^3z^2)$

12) (3x+7)(2x-5)

13) (2y-5)(2y+5)

14) $-7x(4x^5 - 3x^2 + x - 10)$

15) $(x-3)(2x^3 + 5x - 1)$

16) $(x+4)(3x^3 - 2x - 5)$