

5. A: $8^{-2} \cdot 8^{-2} = 8^{-2+(-2)} = 8^{-4}$

6. C: $7^{-5} \div 7^3 = 7^{-5-3} = 7^{-8}$

7. E: $X^8 \div X^2 = X^{8-2} = X^6$

8. A: $X^{-2}X^{-3} = X^{-2+(-3)} = X^{-5} = \frac{1}{X^5}$

9. B: $X^0 = 1$;

Any number raised to the 0 power equals 1.

10. E: $X^{-2}Y^6X^{-3}Y = X^{-2+(-3)}Y^{6+1} = X^{-5}Y^7$

11. B: $A^{-1}A^{-8}B^7B^2 = A^{-1+(-8)}B^{7+2} = A^{-9}B^9$

12. E: $\frac{B^4B^2}{B^{-3}} = B^4B^2B^3 = B^{4+2+3} = B^9$

13. A: $\frac{P^3N^{-2}}{N^2P^4} = P^3N^{-2}N^{-2}P^{-4} = P^{3+(-4)}N^{-2+(-2)} = P^{-1}N^{-4}$

14. D: $(9^2)^5 = 9^{2 \cdot 5} = 9^{10}$

15. C: $(X^A)^B = X^{AB}$

8. C:
$$\begin{array}{r} 4X+3 \\ \times X+1 \\ \hline 4X+3 \\ 4X^2+3X \\ \hline 4X^2+7X+3 \end{array}$$

9. B:
$$\begin{array}{r} X+3 \\ \times X+2 \\ \hline 2X+6 \\ X^2+3X \\ \hline X^2+5X+6 \end{array}$$

10. A:
$$\begin{array}{r} X+4 \\ \times X-2 \\ \hline -2X-8 \\ X^2+4X \\ \hline X^2+2X-8 \end{array}$$

11. C:
$$\begin{array}{r} X+1 \\ \times X+5 \\ \hline 5X+5 \\ X^2+X \\ \hline X^2+6X+5 \end{array}$$

12. D:
$$\begin{array}{r} X-3 \\ \times X-6 \\ \hline -6X+18 \\ X^2-3X \\ \hline X^2-9X+18 \end{array}$$

13. B: Multiplying the two first terms:

$$7X \cdot X = 7X^2$$

14. B: Multiplying the two first terms:

$$2X \cdot X = 2X^2$$

15. B: trinomial

Test 20

1. A: equation is a specific kind of polynomial called a trinomial

2. D:
$$\begin{array}{r} X^2+3X+2 \\ + X^2+4X+5 \\ \hline 2X^2+7X+7 \end{array}$$

3. A:
$$\begin{array}{r} X^2+X+10 \\ + X^2-2X+4 \\ \hline 2X^2-X+14 \end{array}$$

4. E:
$$\begin{array}{r} X^2+8X+6 \\ + X^2-3X-1 \\ \hline 2X^2+5X+5 \end{array}$$

5. E:
$$\begin{array}{r} X^2-5X-2 \\ + X^2-4X-3 \\ \hline 2X^2-9X-5 \end{array}$$

6. C:
$$\begin{array}{r} 2X+3 \\ + 4X-5 \\ \hline 6X-2 \end{array}$$

7. B:
$$\begin{array}{r} 2X^2-9X+5 \\ + X^2+4X-1 \\ \hline 3X^2-5X+4 \end{array}$$

Test 21

1. E:
$$\begin{array}{r} X+A \\ \times X+B \\ \hline BX+AB \\ X^2+AX \\ \hline X^2+(A+B)X+AB \end{array}$$

2. B: $(A+B)X$

3. B: $(X+1)(X+2)$

4. E: $(X+3)(X+5)$

5. B: $(X+6)(X+6)$