

Polynomials Self-Test

Name _____
 Period _____

- _____ 1. $y^7 \cdot y^{11} =$
 A. y^4 B. y^{18} C. y^4 D. $2y^4$
- _____ 2. $(2x)^3 =$
 F. $8x^3$ G. $2x^3$ H. $6x^3$ J. $5x^3$
- _____ 3. $(-b^3m^5)(-2bm) =$
 A. $-3b^2m^4$ B. $-2b^3m^5$ C. $2b^3m^5$ D. $2b^4m^6$
- _____ 4. Which of the following is a binomial?
 A. $x^2 - 3x + 1$ B. $2x$ C. $5x^3 - xy$ D. $x + \frac{2}{y}$
- _____ 5. $\frac{14x^5y^2}{-21x^2y^8} =$
 A. $\frac{-2x^3}{y^6}$ B. $\frac{-2x^3}{3y^6}$ C. $\frac{2x^3}{3y^4}$ D. $\frac{2x^3}{3y^6}$
- _____ 6. $\left(\frac{2x}{5}\right)^2 \cdot \left(\frac{5}{x}\right)^2 =$
 F. $\frac{2x^2}{5}$ G. 2 H. $10x$ J. 4
- _____ 7. $(3a - 2)(4a + 7) =$
 F. $12a^2 - 13a - 14$ G. $12a^2 + 29a + 14$
 H. $7a^2 + 13a - 14$ J. $12a^2 + 13a - 14$
- _____ 8. Find the missing term by the FOIL METHOD of multiplication.
 $(5a + a^2)(3 - a^3) = 15a - 5a^4 + \underline{\hspace{2cm}} - a^5$
 A. 3 B. $3a^2$ C. -3 D. $-3a^2$
- _____ 9. $(5y + 3)^2 =$
 F. $25y^2 + 30y + 9$ G. $10y^2 + 30y + 9$
 H. $25y^2 - 30y + 6$ J. $25y^2 + 9$

Simplify.

10. $[n^5(n^2)]$ 11. $(2a^2)(8a)$ 12. $(-3ab^4)^3$

13. $(4x)^2(b^2)^3$

14. $\frac{(x^2y)^0}{4xy}$

15. $\frac{a^5b^3}{a^7b^2}$

16. $\frac{66w^3x^6y^9}{-22wxy^7}$

17. $\frac{x^{-6}}{x^{-3}}$

18. $\frac{9x^2z^{-5}}{-3xz^3}$

19. $(4x - 5)(x + 2)$

20. $4xy^2(x^2y^2 - 3xy^2 + 2xy^3)$

21. $(m + 7)(m^2 - 7m + 2)$

22. Brian is paid \$225 a week plus a commission of \$25 on each camera he sells. How many must he sell to make a minimum of \$675 a week?

A. at most 18

B. at least 20

C. a minimum of 26

D. a minimum of 18

23. Find the area of a rectangle with length $x + 3$ and width $x - 4$.

24. The diagram shows the wooden floor of a living room with a rectangular rug in the middle. Find the area of the wooden floor bordering the carpet.

