**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_Per:\_\_\_\_\_\_\_\_**

**Polynomials – Worksheet 475**

**State whether each expression is a polynomial. If yes, identify it as a *monomial*, *binomial,* *trinomial* or *polynomial*.**

**1.** $5mn+n^{2}$ **2.** $4by+2b-by$ **3.**  –32

**4.** $\frac{3x}{7}$ **5.** $5x^{2}-3x^{-4}$ **6.** $2c^{2}+8c+9-3$

**Find the degree of each polynomial.**

**7.** 12 **8.** $3r^{4}$ **9.** $b+6$

**10.** $4a^{3}-2a$ **11.** $5abc-2b^{2}+1$ **12.** $8x^{5}y^{4}-2x^{8}$

**Arrange the terms of each polynomial so that the powers of *x* are in descending order.**

**13.** $3x+1+2x^{2}$ **14.** $3a^{2}x^{4}+14a^{2}-10x^{3}+ax^{2}$ **15.** $9x^{2}+2+x^{3}+x$

**16.** $-3+3x^{3}-x^{2}+4x$ **17.** $7r^{5}x+21r^{4}-r^{2}x^{2}-15x^{3}$ **18.** $5x-6+3x^{2}$

**19.** $x^{2}+3x^{3}+27-x$ **20.** $x-3x^{2}+4+5x^{3}$ **21.** $25-x^{3}+x$

**22.** $x^{2}+64-x+7x^{3}$ **23.** $2cx+32-c^{3}x^{2}+6x^{3}$

**24.** $13-x^{3}y^{3}+x^{2}y^{2}+x$



**Write a polynomial to represent the area of each shaded region.**

**25. 26.**