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### 9.1 Practice 2

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

1. $7 a^{2} b+3 b^{2}-a^{2} b$
2. $\frac{1}{5} y^{3}+y^{2}-9$
3. $6 g^{2} h^{3} k$

Find the degree of each polynomial.
4. $x+3 x^{4}-21 x^{2}+x^{3}$
5. $3 g^{2} h^{3}+g^{3} h$
6. $-2 x^{2} y+3 x y^{3}+x^{2}$
7. $5 n^{3} m-2 m^{3}+n^{2} m^{4}+n^{2}$
8. $a^{3} b^{2} c+2 a^{5} c+b^{3} c^{2}$
9. $10 s^{2} t^{2}+4 s t^{2}-5 s^{3} t^{2}$

Arrange the terms of each polynomial in descending order.
10. $8 x^{2}-15+5 x^{5}$
11. $10 a b-7 b^{2}+a^{4}+4 a^{3} b^{2}$
12. $-3 x^{3} y+8 y^{2}+x y^{4}$
13. $7 x y-12+3 x^{3} y+x^{2}$
14. $13 x^{2}-5+6 x^{3}+2$
15. $4 x+2 x^{5}-6 x^{3}+2$
16. $g^{2} x-3 g x^{3}+7 g^{3}+4 x^{2}$
18. $7 a^{2} b^{2}+17-a^{3} b^{3}+2 a b$
17. $-11 x^{2} y^{3}+6 y-2 x y+2 x^{4}$
19. $12 r s^{3}+9 r^{6}+r^{2} s+8 s^{6}$
20. Write a polynomial to represent the value of $t$ ten-dollar bills, $f$ fifty-dollar bills, and $h$ one-hundred-dollar bills.
21. The height above the ground of a ball thrown upward with a velocity of 96 feet per second from a height of 6 feet is: $6+96 t-16 t^{2}$ feet, where $t$ is time in seconds. According to this model, how high is the ball after 7 seconds?

Write a polynomial to represent the area of each shaded region.
23.

24.


