

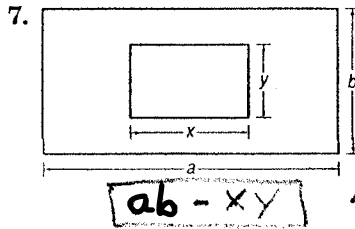
8-4 Skills Practice
Polynomials

If neat, #1-20 can be done on this worksheet.

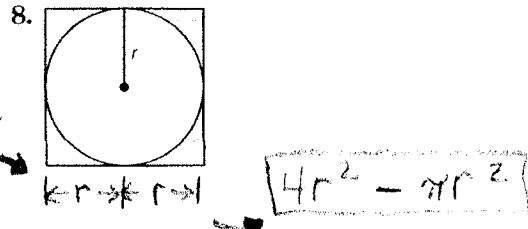
State whether each expression is a polynomial. If the expression is a polynomial, identify it as a *monomial*, a *binomial*, or a *trinomial*.

- | | | |
|-------------------|---------------------|------------------------|
| 1. $5mn + n^2$ | 2. $4by + 2b - by$ | 3. -32 |
| 4. $\frac{3x}{7}$ | 5. $5x^2 - 3x^{-4}$ | 6. $2c^2 + 8c + 9 - 3$ |

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



STUDY these two ANSWERS



Find the degree of each polynomial.

- | | | |
|-----------------|-----------------------|----------------------|
| 9. 12 | 10. $3r^4$ | 11. $b + 6$ |
| 12. $4a^3 - 2a$ | 13. $5abc - 2b^2 + 1$ | 14. $8x^5y^4 - 2x^8$ |

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

- | | |
|--------------------------------------|--------------------------------------|
| 15. $3x + 1 + 2x^2$ | 16. $5x - 6 + 3x^2$ |
| 17. $9x^2 + 2 + x^3 + x$ | 18. $-3 + 3x^3 - x^2 + 4x$ |
| 19. $7r^5x + 21r^4 - r^2x^2 - 15x^3$ | 20. $3a^2x^4 + 14a^2 - 10x^3 + ax^2$ |

Find each sum or difference.

#1-10 ON LOOSE LEAF

8-5

- | | |
|--------------------------------|-------------------------------------|
| 1. $(2x + 3y) + (4x + 9y)$ | 2. $(6s + 5t) + (4t + 8s)$ |
| 3. $(5a + 9b) - (2a + 4b)$ | 4. $(11m - 7n) - (2m + 6n)$ |
| 5. $(m^2 - m) + (2m + m^2)$ | 6. $(x^2 - 3x) - (2x^2 + 5x)$ |
| 7. $(d^2 - d + 5) - (2d + 5)$ | 8. $(2e^2 - 5e) + (7e - 3e^2)$ |
| 9. $(5f + g - 2) + (-2f + 3)$ | 10. $(6k^2 + 2k + 9) + (4k^2 - 5k)$ |
| 11. $(x^3 - x + 1) - (3x - 1)$ | 12. $(b^2 + ab - 2) - (2b^2 + 2ab)$ |