Practice Set 5.7

Use the choices to fill in each blank.

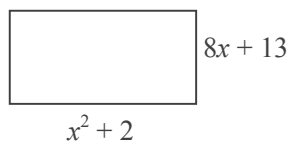|			
cubes	grouping	sum	factor(ed)
square(s)	GCF	difference	symbol(s)

1. The first step in the factoring process is to check for a _____.

2. When factoring a polynomial with two terms, determine whether it is a difference of two _____ or a sum or difference of two _____.

3. When factoring a polynomial with three terms, determine whether it is a perfect _____ trinomial or factor using trial and error, _____, or substitution.

4. When factoring a polynomial with more than three terms, try factoring by _____. If that does not work, see if three terms are the _____ of a binomial.

5. As a final step of factoring a polynomial, check if any factors listed have a common _____ that can be _____ out.
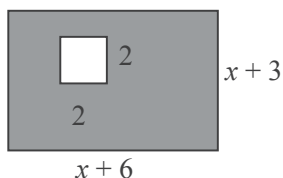
Factor.

6. $2x^3 - 98x$

7. $3x^2y - 30xy + 75y$

6._____

7._____

8. $20x^2 + x - 12$

9. $12x^2 + 14xy - 10y^2$

8._____

9._____

10. $12a^3 - 3a^2 + 21a$

11. $10m^3n - 5m^2n + 45mn$

10._____

11._____

12. $3x^4y^2 + 21x^3y^2 + 36x^2y^2$

13. $2x^4y + 16xy$

12._____

13._____

14. $3x^7y - 81xy$

15. $2x^6 - 16$

14._____

15._____

16. $3x^2 - 24x + 48 - 3y^2$

17. $5y^2 - 20y + 20 - 5x^2$

16._____

17._____

Find an expression, in factored form, for the area or perimeter (as labeled) for each figure.

18. Perimeter

19. Area (shaded part)

18._____

$8x + 13$

$x^2 + 2$

2

2

$x + 3$

$x + 6$

19._____