

Chapter 10 — Factoring

Worksheet A: Guided Practice

Name: _____ Grade: _____ Date: _____

1. Factor $12x + 18$.

Find the GCF of 12 and 18.

2. Factor $14x^2 - 21x$.

The GCF includes a number and x .

3. Factor $15x^3 + 10x^2 - 5x$.

Find the GCF of all terms first.

4. Factor $x^2 + 11x + 24$.

Find two numbers with product 24 and sum 11.

5. Factor $x^2 - 11x + 24$.

The factors multiply to positive 24 and add to negative 11.

6. Factor $x^2 + 2x - 35$.

The factors have opposite signs.

7. Factor $x^2 - 64$.

Rewrite 64 as 8^2 .

8. Factor $x^2 - 5x - 24$.

The larger absolute value is negative.

9. Factor $x^2 + 12x + 36$.

Check whether the first and last terms are squares.

10. Factor $16x^2 - 9$.

Rewrite $16x^2$ as $(4x)^2$.

11. Factor $x^2 - 18x + 81$.

The middle term should equal $2(x)(-9)$.

12. Factor $9x^2 - 49$.

Both terms are perfect squares.

13. Factor completely $4x^3 - 36x$.

Take out the GCF before looking for another pattern.

14. Factor completely $2x^2 - 18$.

Factor out the GCF first, then check for a difference of squares.

15. Does $x^2 + 49$ factor over the integers? Explain.

Difference of squares requires subtraction.
