

Algebra 2 – Quadratic Factoring
Basic Factoring and Slide and Divide

Name: Key Hour: _____

Factor the following quadratic expressions.

1. $x^2 - 5x - 6$ -6 $+1$ Answer: $(x-6)(x+1)$

2. $x^2 + x - 12$ $+4$ -3 Answer: $(x+4)(x-3)$

3. $x^2 - 11x + 28$ -7 -4 Answer: $(x-7)(x-4)$

4. $x^2 - 5x - 24$ -8 3 Answer: $(x-8)(x+3)$

5. $x^2 + 7x + 6$ 1 6 Answer: $(x+1)(x+6)$

6. $x^2 - 5x + 6$ -2 -3 Answer: $(x-2)(x-3)$

7. $x^2 - 4x - 21$ -7 3 Answer: $(x-7)(x+3)$

8. $x^2 - 13x + 22$ -11 -2 Answer: $(x-11)(x-2)$

9. $x^2 + x - 42$ 7 -6 Answer: $(x+7)(x-6)$

10. $x^2 - 14x + 45$ -9 -5 Answer: $(x-9)(x-5)$

Factor the following quadratics using "Slide and Divide" Factoring.

11. $2x^2 + x - 6$ $(x+2)(2x-3)$ Answer: $(x+2)(2x-3)$
 $x^2 + x - 12$
 $(x+\frac{4}{2})(x-\frac{3}{2})$

12. $6x^2 - x - 1$ $(x-\frac{1}{2})(x+\frac{1}{3})$ Answer: $(2x-1)(3x+1)$
 $x^2 - x - 6$
 $(x-\frac{3}{6})(x+\frac{2}{6})$ $(2x-1)(3x+1)$

13. $8x^2 + 2x - 3$ $(x+\frac{3}{4})(x-\frac{1}{2})$ Answer: $(4x+3)(2x-1)$
 $x^2 + 2x - 24$
 $(x+\frac{6}{8})(x-\frac{4}{8})$

14. $15x^2 - 4x - 4$ Factor of 60: Answer: $(3x-2)(5x+2)$
 $x^2 - 4x - 60$ 1, 2, 3, 4, 5, 12, 15, 20, 30, 60
 $(x-\frac{10}{15})(x+\frac{6}{15})$ $\frac{6, 10}{}$
 $(x-\frac{2}{3})(x+\frac{2}{5})$

15. $24x^2 - 14x - 5$ $(x-\frac{5}{6})(x+\frac{1}{4})$ Answer: $(6x-5)(4x+1)$
 $x^2 - 14x - 120$
 $(x-\frac{20}{24})(x+\frac{6}{24})$