

Factoring - Day 4

Extra Practice

Name Key

Date _____ Period _____

Step 1: Completely factor each standard form expression.

Step 2: Find the factor in the table and write the corresponding point in the bank given.

Step 3: Plot each point.

Step 4: Connect the points in numerical order to create a fabulous picture!

1. $x^2 + 5x + 4$

Pt: (14, -6)

2. $x^2 - 7x + 12$

Pt: (8, -2)

$(x + 4)(x + 1)$

$(x - 4)(x - 3)$

3. $x^2 - 8x - 20$

Pt: (-3, -4)

4. $x^2 - 6x$

Pt: (-3, -8)

$(x + 2)(x - 10)$

$x(x - 6)$

5. $x^2 + 10x + 25$

Pt: (-6, -3)

6. $\frac{2x^2 + 14x - 36}{2}$

Pt: (-11, -1)

$(x + 5)(x + 5)$
 $(x + 5)^2$

$2(x^2 + 7x - 18)$
 $2(x + 9)(x - 2)$

7. $\frac{2x^2 + 14x}{2x}$

Pt: (-9, 0)

8. $x^2 - 16x + 55$

Pt: (-13, 2)

$2x(x + 7)$

$(x - 11)(x - 5)$

9. $x^2 + x - 56$

Pt: (-3, 3)

10. $\frac{2x^2 + 7x}{x}$

Pt: (2, 7)

$(x + 8)(x - 7)$

$x(2x + 7)$

11. $x^2 - 144$

Pt: (1, 2)

12. $x^2 - 17x + 72$

Pt: (9, -1)

$(x + 12)(x - 12)$

$(x - 9)(x - 8)$

13. $x^2 + 48x - 49$

Pt: (15, 3)

14. $\frac{x^3 + 21x^2 + 110x}{x}$

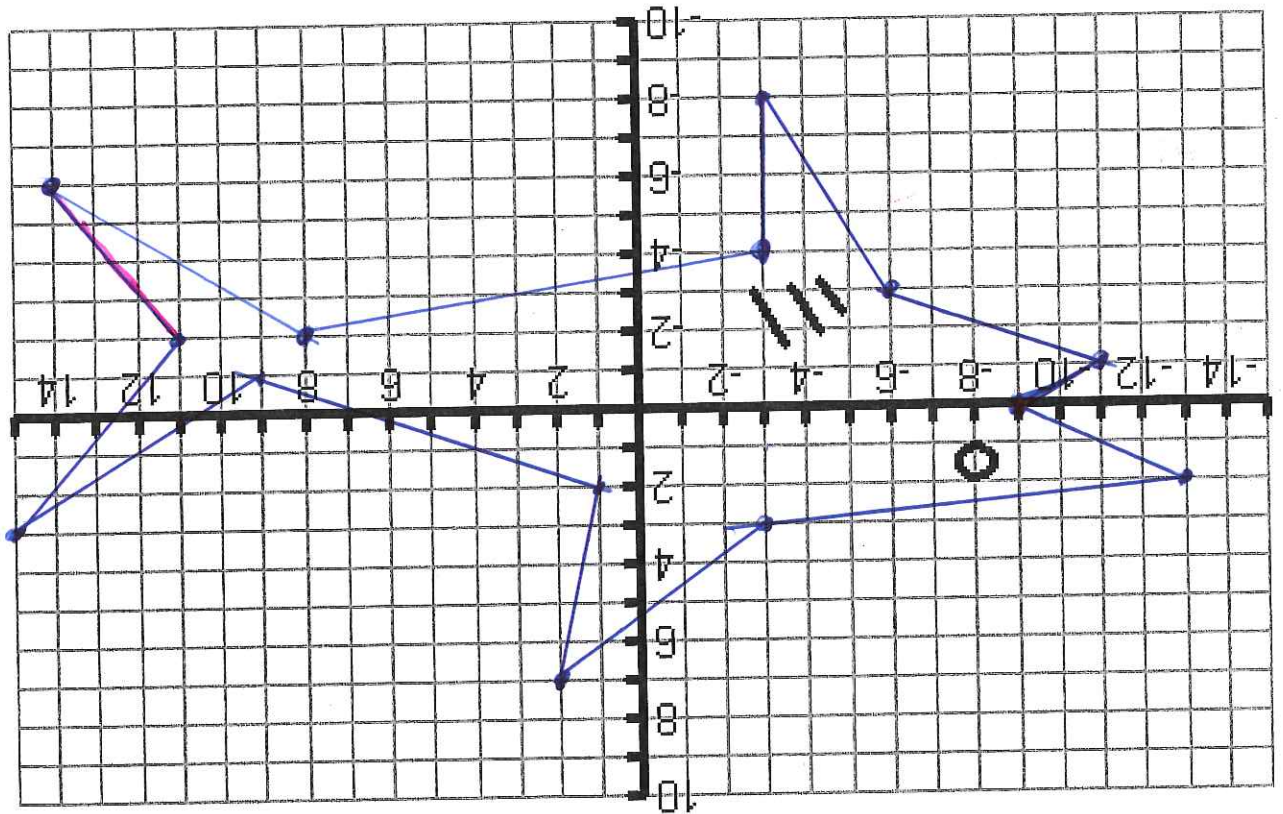
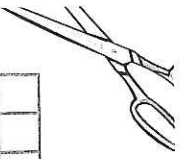
Pt: (11, -2)

$(x + 49)(x - 1)$

$x(x^2 + 21x + 110)$
 $x(x + 11)(x + 10)$

| Factor | Ordered Pair |
|----------------------------------|-----------------------------------|
| $(x - 6)$ | $(-3, -8)$ |
| $(2x + 7)$ | $(2, 7)$ |
| $(x + 1)$ | $(14, -6)$ |
| $(x + 5)$ | $(-6, -3)$ |
| $(x - 8)$ | $(9, -1)$ |
| $(x - 4)$ | $(8, -2)$ |
| $(x - 2)$ | $(-11, -1)$ |
| $(x - 1)$ | $(15, 3)$ |
| $(x - 5)$ | $(-13, 2)$ |
| $(x + 12)$ | $(1, 2)$ |
| $(x + 10)$ | $(11, -2)$ |
| $(x + 8)$ | $(-3, 3)$ |
| $(x - 10)$ | $(-3, -4)$ |
| $2x$ | $(-9, 0)$ |

Connect the point from #14 to the point from #1 and enjoy!



Solving Quadratics SQ9
Factoring Day 4

Name: _____
key