

Prepare for Factoring Block (Algebra)

Learning Goal: Get ready for factoring by practicing with factor pairs and factor thinking. This is a (ideally) a two-player game.

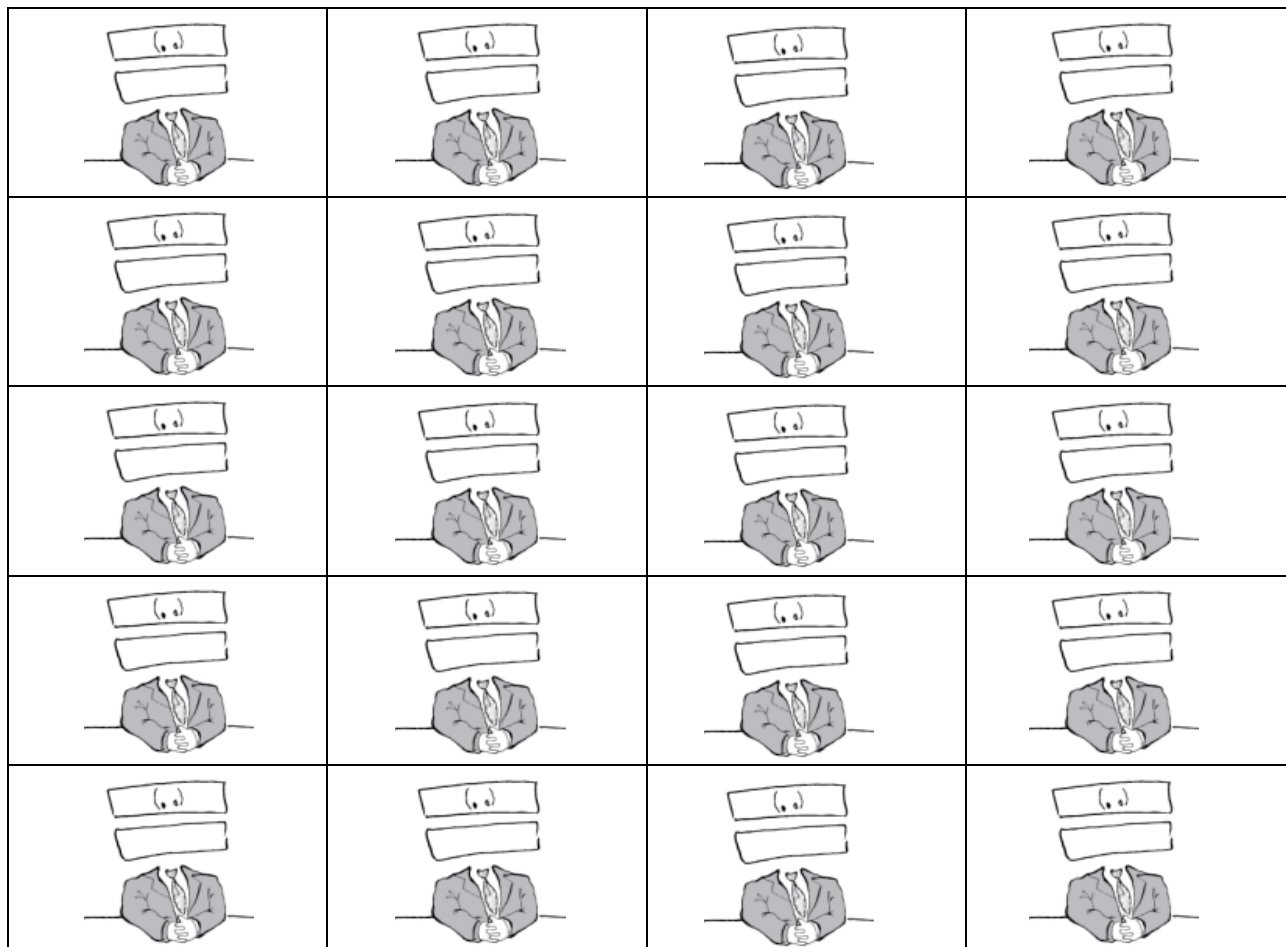
Game Setup: There is a gameboard, a set of game tiles, and two sets of player ID cards (one set is X, one set is =). It is very important that the game tile pages get printed back to back on **cardstock** so that when it is cut out, you might see correct pairs as the front and back of a card. The player cards (= or x) should NOT be printed double sided. Print the two pages of game tiles on different colors for easier sorting of levels.

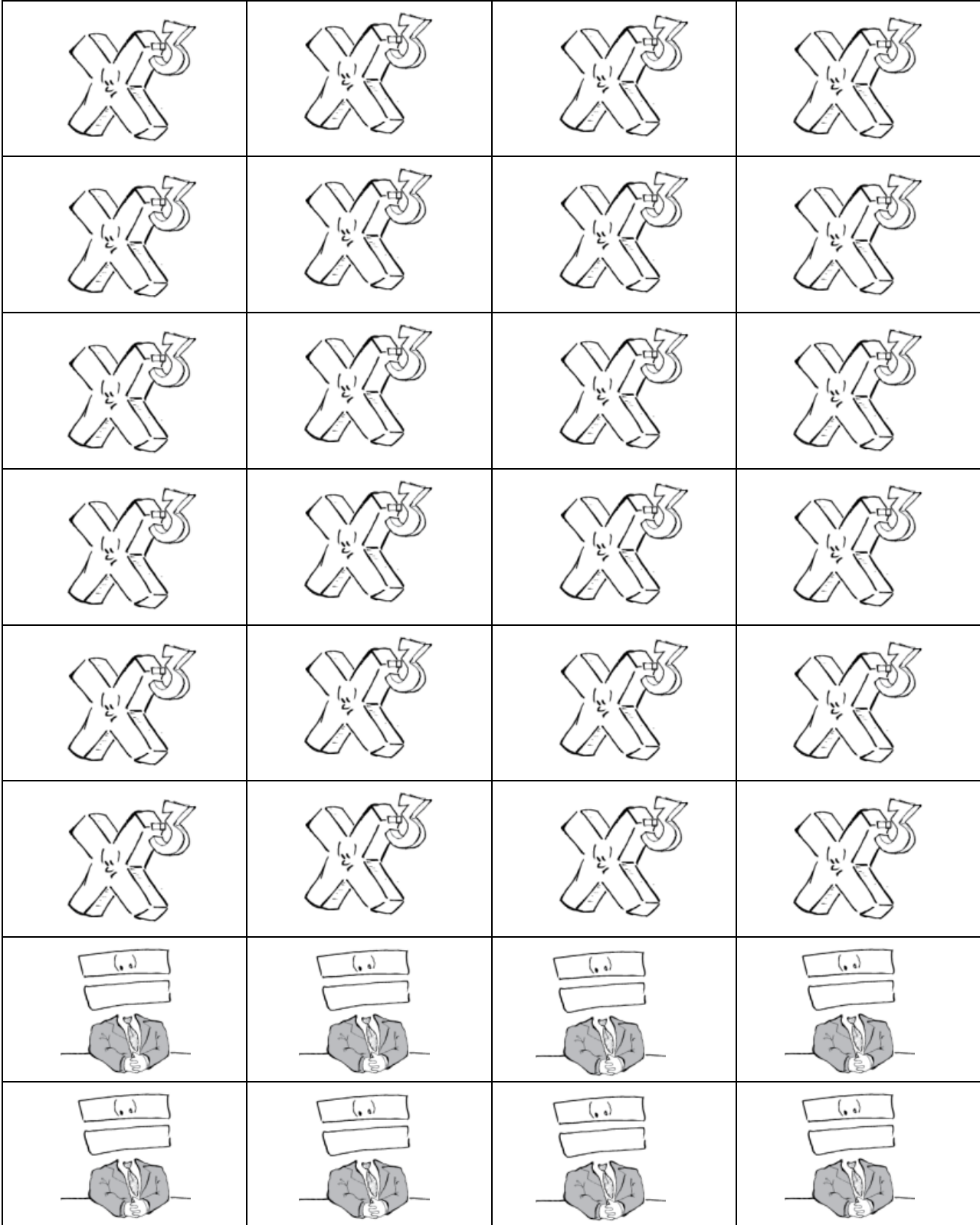
List four factor pairs for 24.	1×24 , 2×12 , 3×8 , 4×6
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1. Place all the game tiles on the gameboard (see note about levels below).
2. Players take turns declaring the answer for a card, then checking it. If they are correct, they get to stake a claim on the space. If they are incorrect, their opponent gets to claim the space.
3. The goal is to place four player ID cards on the board in a row, column, or on a diagonal.

Level 1: Use the cards that only involve numbers.

Level 2: Use the cards with variable expressions.





List four factor pairs for 24.	List four factor pairs for 30.	What is the GCF of 12 and 18?	What is the GCF of 8 and 24?
List three factor pairs for 18.	List three factor pairs for 44.	What is the GCF of 25 and 35?	What is the GCF of 18 and 36?
List three factor pairs for 32.	List two factor pairs for 35.	What is the GCF of 21 and 49?	What is the GCF of 20 and 50?
List four factor pairs for 40.	List five factor pairs for 48.	What is the GCF of 24 and 64?	What is the GCF of 20 and 60?
List three factor pairs for 45.	List six factor pairs for 60.	What is the GCF of 72 and 63?	What is the GCF of 81 and 36?
List three factor pairs for 50.	List two factor pairs for 8.	What is the GCF of 55 and 88?	What is the GCF of 25 and 50?
List three factor pairs for 12.	List five factor pairs for 36.	What is the GCF of 36 and 60?	What is the GCF of 15 and 45?
List two factor pairs for 21.	List four factor pairs for 66.	What is the GCF of 42 and 35?	What is the GCF of 18 and 9?
List three factor pairs for 28.	List three factor pairs for 16.	What is the GCF of 36 and 48?	What is the GCF of 12 and 42?

8	6	1×30, 2×15, 3×10, 5×6	1×24, 2×12, 3×8, 4×6
18	5	1×44, 2×22, 4×11	1×18, 2×9, 3×6
10	7	1×35, 5×7	1×32, 2×16, 4×8
20	8	1×48, 2×24, 3×16, 4×12, 6×8	1×40, 2×20, 4×10, 5×8
9	9	1×60, 2×30, 3×20, 4×15, 5×12, 6×10	1×45, 3×15, 5×9
25	11	1×8, 2×4	1×50, 2×25, 5×10
15	12	1×36, 2×18, 3×12, 4×9, 6×6	1×12, 2×6, 3×4
9	7	1×66, 2×33, 3×22, 6×11	1×21, 3×7
6	12	1×16, 2×8, 4×4	1×28, 2×14, 4×7

What is the GCF of x^2 and x^3 ?	What is the GCF of $9x^2$ and $12x^2$?	Fill in the blank. $3x \cdot \underline{\hspace{1cm}} = 6x^3$	Fill in the blank. $6w^2 \cdot \underline{\hspace{1cm}} = 48w^4$
What is the GCF of x^2 and x^4 ?	What is the GCF of $9x$ and $6x^2$?	Fill in the blank. $3x^2 \cdot \underline{\hspace{1cm}} = 6x^3$	Fill in the blank. $8w^3 \cdot \underline{\hspace{1cm}} = 48w^4$
What is the GCF of x^3 and x^5 ?	What is the GCF of $2x^2$ and $6x^2$?	Fill in the blank. $3x^3 \cdot \underline{\hspace{1cm}} = 6x^3$	Fill in the blank. $4w \cdot \underline{\hspace{1cm}} = 48w^4$
What is the GCF of $2w$ and $4w$?	What is the GCF of $24y$ and $36y$?	Fill in the blank. $a \cdot \underline{\hspace{1cm}} = 5a^3$	Fill in the blank. $4b \cdot \underline{\hspace{1cm}} = 4b^2$
What is the GCF of $12w$ and $8w$?	What is the GCF of $8y^2$ and $20y^3$?	Fill in the blank. $a^2 \cdot \underline{\hspace{1cm}} = 5a^3$	Fill in the blank. $4b \cdot \underline{\hspace{1cm}} = 16b^3$
What is the GCF of $2w^2$ and $4w$?	What is the GCF of $14y$ and $21y^2$?	Fill in the blank. $5a^2 \cdot \underline{\hspace{1cm}} = 5a^3$	Fill in the blank. $4b \cdot \underline{\hspace{1cm}} = 36b$
What is the GCF of a^6 and a^4 ?	What is the GCF of $4xy$ and $6xy$?	Fill in the blank. $2y \cdot \underline{\hspace{1cm}} = -4y^2$	Fill in the blank. $9 \cdot \underline{\hspace{1cm}} = 54c^3$
What is the GCF of $2a^6$ and a^4 ?	What is the GCF of x^2y and xy^2 ?	Fill in the blank. $-2 \cdot \underline{\hspace{1cm}} = -4y^2$	Fill in the blank. $8 \cdot \underline{\hspace{1cm}} = 56c^2$
What is the GCF of a^6 and $2a$?	What is the GCF of xy and x^2y^2 ?	Fill in the blank. $4y^2 \cdot \underline{\hspace{1cm}} = -4y^2$	Fill in the blank. $7 \cdot \underline{\hspace{1cm}} = 28c$

$8w^2$	$2x^2$	$3x^2$	x^2
$6w$	$2x$	$3x$	x^2
$12w^3$	2	$2x^2$	x^3
b	$5a^2$	$12y$	$2w$
$4b^2$	$5a$	$4y^2$	$4w$
9	a	$7y$	$2w$
$6c^3$	$-2y$	$2xy$	a^4
$7c^2$	$2y^2$	xy	a^4
$4c$	-1	xy	a