

# What the Factor!

## Rules:

Each player gets a playing board. Play begins by turning one card over. All players try to factor the expression on the card. The first person to correctly factor the expression on the card scores as follows:

5 points if the answer is on their own playing board (and everyone else scores 0 points).

2 points if the answer is on another person's playing board. In addition, the other person scores 1 point. If the answer is on more than one other person's playing board, both other people score 1 point and the person who answered correctly scores 0 points.

3 points if the answer is not on any player's playing board (this can only happen if all boards are not in use).

The first person to 25 points wins.

### Playing Boards

$(x - 3)(2x - 3)$	$(3x + 7)(4x + 13)$	$(x + 1)(3x - 1)$	$-(x - 3)(9x - 62)$	$(x + 1)(5x - 3)$	$(x - 1)(2x - 5)$
$(x + 2)(2x + 7)$	$(2x + 7)(9x - 1)$	$(x - 1)(2x - 5)$	$8 + 8\sqrt{x} + 4$	$(x - 6)(x + 9)$	$x(5x + 8)$
$(2x - 1)(4x + 1)$	$(x - 3)(x + 3)$	$8 + 8\sqrt{x} + 4$	$(2x + 5)(3x + 14)$	$-(x - 1)(x + 1)$	$(x + 1)(5x - 3)$
$(3x + 7)(4x + 13)$	$(x - 1)(x + 1)$	$(x - 3)(x + 3)$	$(2y + 7)(9y - 1)$	$x(5x + 8)$	$(x + 1)(2x + 1)$
$(x + 2)(2x + 7)$	$(x - 1)(x + 1)$	$(x + 1)(2x + 1)$	$(2x - 3)(3x + 4)$	$(2x + 5)(3x + 14)$	$-4x(2x - 1)$
$(2x - 1)(4x + 1)$	$(t - 4)^2(t + 4)^2$	$(x - 11)(2x + 3)$	$(5x - 2)^2$	$(2x - 3)(3x + 4)$	$-(x - 3)(9x - 62)$

# Playing Cards

**What the Factor!**

$$2(x + 1)^2 + 7(x + 1) + 5$$

**What the Factor!**

$$12(x + 3)^2 - 5(x + 3) - 2$$

**What the Factor!**

$$5(x + 2)^2 - 12(x + 2) + 4$$

**What the Factor!**

$$6(x + 5)^2 - 17(x + 5) + 5$$

**What the Factor!**

$$2(x - 3)^2 + 5(x - 3) + 2$$

<p><b>What the Factor!</b></p> $-9(x - 7)^2 - 37(x - 7) - 4$	<p><b>What the Factor!</b></p> $(3 + \sqrt{x})^2 - 2(3 - \sqrt{x}) + 1$
<p><b>What the Factor!</b></p> $(x^2 - 8)^2 - 16(x^2 - 8) + 64$	<p><b>What the Factor!</b></p> $x(2x - 19) - 33$
<p><b>What the Factor!</b></p> $x(5x + 2) - 3$	<p><b>What the Factor!</b></p> $x(x - 2) - 9 + 2x$

<p><b>What the Factor!</b></p> $(x + 7)(x - 4) - 26$	<p><b>What the Factor!</b></p> $(2x + 1)(3x - 2) - 10$
<p><b>What the Factor!</b></p> $(2x - 1)(x + 2) + 3$	<p><b>What the Factor!</b></p> $4x^2 - (x - 1)^2$
<p><b>What the Factor!</b></p> $9x^2 - (x + 1)^2$	<p><b>What the Factor!</b></p> $6x^2 + 7x - 3 + 12x^2 + 54x - 4$

<p><b>What the Factor!</b></p> $16x^2 - 3x + 1 + 9x^2 - 17x + 3$	<p><b>What the Factor!</b></p> $(2x - 3)(x + 1) - 4(2x - 3)$
<p><b>What the Factor!</b></p> $(1 - 2x)(1 + 2x) - (1 - 2x)^2$	<p><b>What the Factor!</b></p> $x(x + 1) - (x + 1)$
<p><b>What the Factor!</b></p> $(x + 1)(x + 2) - 6x - (2x - 1)(x - 1)$	

# Answers

**What the Factor!**

$$2(x + 1)^2 + 7(x + 1) + 5$$

$$(x + 2)(2x + 7)$$

**What the Factor!**

$$12(x + 3)^2 - 5(x + 3) - 2$$

$$(3x + 7)(4x + 13)$$

**What the Factor!**

$$5(x + 2)^2 - 12(x + 2) + 4$$

$$x(5x + 8)$$

**What the Factor!**

$$6(x + 5)^2 - 17(x + 5) + 5$$

$$(2x + 5)(3x + 14)$$

**What the Factor!**

$$2(x - 3)^2 + 5(x - 3) + 2$$

$$(x - 1)(2x - 5)$$

<p style="text-align: center;"><b>What the Factor!</b></p> $-9(x - 7)^2 - 37(x - 7) - 4$ $-(x - 3)(9x - 62)$	<p style="text-align: center;"><b>What the Factor!</b></p> $(3 + \sqrt{x})^2 - 2(3 - \sqrt{x}) + 1$ $8 + 8\sqrt{x} + 4$
<p style="text-align: center;"><b>What the Factor!</b></p> $(x^2 - 8)^2 - 16(x^2 - 8) + 64$ $(x - 4)^2(x + 4)^2$	<p style="text-align: center;"><b>What the Factor!</b></p> $x(2x - 19) - 33$ $(x - 11)(2x + 3)$
<p style="text-align: center;"><b>What the Factor!</b></p> $x(5x + 2) - 3$ $(x + 1)(5x - 3)$	<p style="text-align: center;"><b>What the Factor!</b></p> $x(x - 2) - 9 + 2x$ $(x - 3)(x + 3)$



<p style="text-align: center;"><b>What the Factor!</b></p> $(x + 7)(x - 4) - 26$ $(x - 6)(x + 9)$	<p style="text-align: center;"><b>What the Factor!</b></p> $(2x + 1)(3x - 2) - 10$ $(2x - 3)(3x + 4)$
<p style="text-align: center;"><b>What the Factor!</b></p> $(2x - 1)(x + 2) + 3$ $(x + 1)(2x + 1)$	<p style="text-align: center;"><b>What the Factor!</b></p> $4x^2 - (x - 1)^2$ $(x + 1)(3x - 1)$
<p style="text-align: center;"><b>What the Factor!</b></p> $9x^2 - (x + 1)^2$ $(2x - 1)(4x + 1)$	<p style="text-align: center;"><b>What the Factor!</b></p> $6x^2 + 7x - 3 + 12x^2 + 54x - 4$ $(2x + 7)(9x - 1)$

<p style="text-align: center;"><b>What the Factor!</b></p> $16x^2 - 3x + 1 + 9x^2 - 17x + 3$ $(5x - 2)^2$	<p style="text-align: center;"><b>What the Factor!</b></p> $(2x - 3)(x + 1) - 4(2x - 3)$ $(x - 3)(2x - 3)$
<p style="text-align: center;"><b>What the Factor!</b></p> $(1 - 2x)(1 + 2x) - (1 - 2x)^2$ $-4x(2x - 1)$	<p style="text-align: center;"><b>What the Factor!</b></p> $x(x + 1) - (x + 1)$ $(x - 1)(x + 1)$
<p style="text-align: center;"><b>What the Factor!</b></p> $(x + 1)(x + 2) - 6x - (2x - 1)(x - 1)$ $-(x - 1)(x + 1)$	