

55.

Old Poly

Topic: Multiplication of polynomials or factoring of polynomials

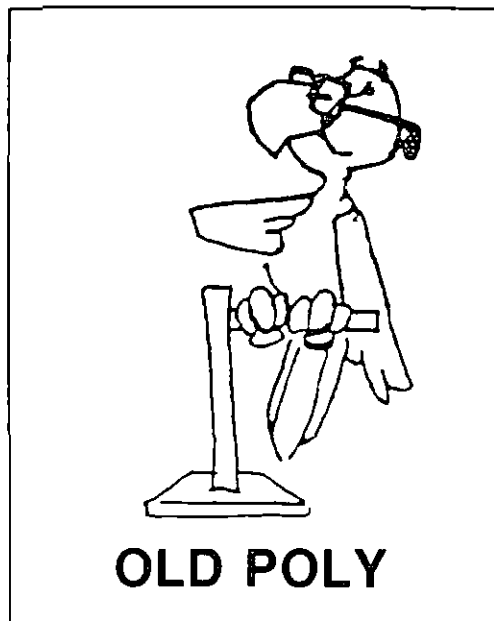
Level: Grades 8–10


























Number of
Players: 3–4





















Materials: Set of “Old Poly” playing cards

- Procedure:
1. The dealer shuffles the cards and deals them all out. All players match the polynomial with its factors for those pairs in their hand. These pairs are placed face up on the table.
 2. Players then pass 3 of the remaining cards to the player to their right. If new pairs are formed from this action, players add these to the spread in front of them.
 3. To begin the draw, the player on the left of the dealer draws a card from the hand of the player to his or her left. If the drawn card completes a pair, the player plays the pair face up with the others. Otherwise, the player keeps the card, and the next player to the left draws from the player to his or her left.
 4. Play continues until all the pairs are formed, leaving 1 player with the “Old Poly” card. This person is the loser. Players drop out of the game as their cards are depleted.

Variation: The player left with the “Old Poly” card is the winner!



$(a - 2)^2$  $(a - 2)^2$	$(p + 8)(p - 8)$  $(p + 8)(p - 8)$	$(a - 5)^2$  $(a - 5)^2$	$(p + 7)(p - 7)$  $(p + 7)(p - 7)$	$p^2 - 64$  $p^2 - 64$
$a^2 - 10a + 25$  $a^2 - 10a + 25$	$p^2 - 49$  $p^2 - 49$	$(c + 2)(c - 2)$  $(c + 2)(c - 2)$	$c^2 - 4$  $c^2 - 4$	$(5x + 4y)(5x - 4y)$  $(5x + 4y)(5x - 4y)$
$(a - 3)^2$  $(a - 3)^2$	$(5n - 1)^2$  $(5n - 1)^2$	<p style="text-align: center;">OLD POLY</p> 	$25x^2 - 16y^2$  $25x^2 - 16y^2$	$a^2 - 6a + 9$  $a^2 - 6a + 9$
$25n^2 - 10n + 1$  $25n^2 - 10n + 1$	$25n^2 + 30n + 9$  $25n^2 + 30n + 9$	$(5n + 3)^2$  $(5n + 3)^2$	$(p + 5)(p - 5)$  $(p + 5)(p - 5)$	$4p^2 - 9$  $4p^2 - 9$
$(x + 2)^2$  $(x + 2)^2$	$b^2 - c^2$  $b^2 - c^2$	$(2p + 3)(2p - 3)$  $(2p + 3)(2p - 3)$	$x^2 + 4x + 4$  $x^2 + 4x + 4$	$(b + c)(b - c)$  $(b + c)(b - c)$

$(3x - y)^2$  $(3x - y)^2$	$(2a + 1)^2$  $(2a + 1)^2$	$9p^2 - 25$  $9p^2 - 25$	$9x^2 - 6xy + y^2$  $9x^2 - 6xy + y^2$	$4a^2 + 4a + 1$  $4a^2 + 4a + 1$
$(3p + 5)(3p - 5)$  $(3p + 5)(3p - 5)$	$16a^2 - 8a + 1$  $16a^2 - 8a + 1$	$(4a - 1)^2$  $(4a - 1)^2$	$p^2 - 25$  $p^2 - 25$	$4p^2 - 25$  $4p^2 - 25$
$(x + 6y)^2$  $(x + 6y)^2$	$x^2 + 12xy + 36y^2$  $x^2 + 12xy + 36y^2$	$x^2 - 1$  $x^2 - 1$	$(x - 1)^2$  $(x - 1)^2$	$b^2 - 16$  $b^2 - 16$
$(x + 1)(x - 1)$  $(x + 1)(x - 1)$	$x^2 - 2x + 1$  $x^2 - 2x + 1$	$(b + 4)(b - 4)$  $(b + 4)(b - 4)$	$(2p + 5)(2p - 5)$  $(2p + 5)(2p - 5)$	$a^2 - 4a + 4$  $a^2 - 4a + 4$