Scavenger Hunt: Operations with Polynomials

(Tiered Activity)

With student record sheet and 3 levels of tiered problem sets included

Teacher Instructions:

This activity should be used as a review of adding and subtracting polynomials. To set up the activity, separate students into groups and reserve a space in your room (e.g. a spare desk or table) for your "Answer Pile".

Each group is given a starting problem card and told to copy the problem onto their record sheet. Each student solves independently and when the entire group has finished, they compare results. If their answers are the same, one student walks over to the "Answer Pile", finds the matching answer, and brings that card back to the group. When they turn the card over, they will find the next problem. If they choose a "distractor" card, they will find a message directing them to attempt the problem again. The group then repeats the process 8 more times, until they arrive back at their original problem.

Note: If you have more than one group working on the same Level of cards at a time, remind students to return every card to the Answer Pile when they have finished with it.

Printing Instructions:

For student record sheet:
Print pages 4-5 double sided

For scavenger hunt cards:
Print pages 6-17 double sided

Note: Due to the high number of scavenger hunt cards, some teachers like to print each Level on different colored paper. This helps the teacher keep track of the cards, but it also helps the students a lot by limiting their options of cards from 27 possibilities down to only 9. Keep this in mind when you are considering how challenging you want to make this for your students!

For this activity, I usually do not let groups know which "Level" they are on. The problems increase in difficulty from Level 1 up to Level 3. I usually start my most advanced learners on Level 3 and, if they finish early, start them on Level 2 or 1 if time allots.

Student Record Sheet

Name: _____ Date: _____ Group Leader: _____

Problem 1:

Final Answer: _____

Does your answer match with **all** your groupmates? If not, trade papers and check.
If yes, send your leader to find the matching card in the Answer Pile.

Problem 2:

Final Answer: _____

Check your answer with your groupmates again. If there are any disagreements, resolve them before retrieving your card!

Problem 3:

Final Answer: _____

Check again! Repeat this process after every problem!

Problem 4:

Final Answer: _____

One you have checked, move onto the back of the page!

Problem 5:

Final Answer: _____

Check with groupmates!

Problem 6:

Final Answer: _____

Check with groupmates!

Problem 7:

Final Answer: _____

Check with groupmates!

Problem 8:

Final Answer: _____

Problem 9:

Final Answer: _____

If your answer is correct, you should arrive back at your original problem!

Level 1 Cards

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$-12b + 6b - 4b$

Simplify:

$8a + 10(6a - 1)$

Simplify:

$-2x - (9 - 10x)$

Simplify:

$-16n - 14n$

Simplify:

$-r - 10r$

Simplify:

$n - 10 + 9n - 3$

$8x - 9$

$68a - 10$

$-11r$

$-30n$

a

$10n - 13$

Level 1 Cards Cont'd

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$-6a + 7a$

Simplify:

$5x^2 - 6x + 7x^2 + 3x - x$

Simplify:

$6 + 3a + 4a$

Try distributing the negative!

Check your math!

Try again!

$7a + 6$

$12x^2 - 4x$

$-12x - 9$

$-10b$

$10n - 7$

$-2n$

Level 2 Cards

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$2h^2 - 7h + 2h^2 - h + 6 + 4h$

Simplify:

$7(-x + 2y - 3) + 1$

Simplify:

$15m - 3(5m + 1)$

Simplify:

$17 - 6a + 2(a - 8)$

Simplify:

$-4(2h^2 + 5h - 11)$

Simplify:

$8m + 12m + m - 5m$

-3

$-7x + 14y - 20$

$-8h^2 - 20h + 44$

$-4a + 1$

$-11a + 6$

$16m$

Level 2 Cards Cont'd

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$-14a + 8 + 3a - 2$

Simplify:

$12 - (4y + 5)$

Simplify:

$10 - 5(9n - 9)$

Try distributing the negative!

Try distributing the negative!

Try distributing the negative!

$55 - 45n$

$-4y + 7$

$-35 - 45n$

$4h^2 - 4h + 6$

$-15m + 18$

$-4y + 17$

Level 3 Cards

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$(2x^2 - 3x + 6) - (5x^2 - 9x + 4) + (8x^2 - 12x)$

Simplify:

$30 - 5(8y - 8)$

Simplify:

$-2n + 3(9-4n)$

Simplify:

$20n - 7(n+3) - 8(1+8n)$

Simplify:

$9y + 10(6y - 1)$

Simplify:

$-10(1-9x) + 6(x-10)$

$-14n + 27$

$-40y + 70$

$69y - 10$

$-51n - 29$

$32a - 5$

$96x - 70$

Level 3 Cards Cont'd

(Print or copy on double-sided paper and cut out ahead of time)

Simplify:

$7a + 5(5a - 1)$

Simplify:

$-9(6m-3) + 6(1+4m)$

Simplify:

$-5(2x + 4y) + 3x$

Check your math!

Check your work!

Try again!

$-7x - 20y$

$-30m + 33$

$5x^2 - 24x + 10$

$5x^2 - 6x + 2$

$-40y - 10$

$-15n + 13$

Level 1 Order:

$8a + 10(6a - 1) \rightarrow -12b + 6b - 4b \rightarrow$

$6 + 3a + 4a \rightarrow 5x^2 - 6x + 7x^2 + 3x - x$

$-6a + 7a \rightarrow n - 10 + 9n - 3 \rightarrow$

$-r - 10r \rightarrow -16n - 14n \rightarrow -2x - (9 - 10x)$

Level 2 Order:

$2h^2 - 7h + 2h^2 - h + 6 + 4h \rightarrow 10 - 5(9n - 9) \rightarrow$

$12 - (4y + 5) \rightarrow -14a + 8 + 3a - 2 \rightarrow$

$8m + 12m + m - 5m \rightarrow -4(2h^2 + 5h - 11) \rightarrow$

$17 - 6a + 2(a - 8) \rightarrow 15m - 3(5m + 1) \rightarrow$

$7(-x + 2y - 2) + 1$

Level 3 Order:

$(2x^2 - 3x + 6) - (5x^2 - 9x + 4) + (8x^2 - 12x) \rightarrow$

$-5(2x + 4y) + 3x \rightarrow$

$-9(6m - 3) + 6(1 + 4m) \rightarrow 7a + 5(5a - 1) \rightarrow$

$10(1 - 9x) + 6(x - 10) \rightarrow 9y + 10(6y - 1) \rightarrow$

$20n - 7(n+3) - 8(1+8n) \rightarrow -2n + 3(9 - 4n) \rightarrow$

$30 - 5(8y - 8)$

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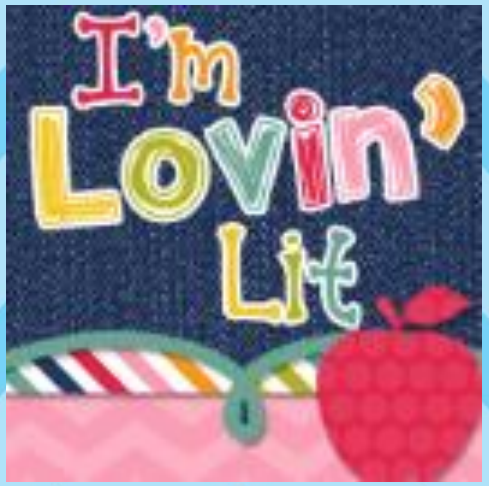

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