

LESSON 26 | MEET THE IDEA

Unit 4 checkpoint and symbolic-fluency repair

Thursday, January 28, 2027 . 6:00–7:00 PM Central

By the end, I can...

Choose the right symbolic operation, explain why a step works and repair a specific mistake using evidence from your work.

This is a **revision and correction guide**, not the graded checkpoint. Your teacher supplies the assessment separately. Today introduces no new topic.

Operation	First question to ask
Exponent rules	Am I multiplying, dividing or raising a power? Do the bases match?
Square roots	Is there a perfect-square factor? Is the real root defined?
Polynomial addition / subtraction	Are the terms alike? Have I distributed the minus sign?
Polynomial multiplication	Has every term multiplied every term?
Polynomial division	Have I aligned powers, subtracted the whole product and kept the restriction?

Our one-hour checkpoint lesson

- 5 minutes: recall key ideas.
- 20 minutes: a mixed chapter checkpoint.
- 25 minutes: corrections and targeted teaching.
- 10 minutes: exit check and next steps.

LESSON 26 | READ THE OPERATION CAREFULLY

An error can show you what to repair

Incorrect claim	Correction	Why
$x^2 \times x^3 = x^6$	x^5	Add exponents for multiplication of the same base.
$x^{-2} = -x^2$	$1/x^2, x \neq 0$	A negative exponent means reciprocal, not a negative value.
$\sqrt{(9 + 16)} = 7$	$\sqrt{(25)} = 5$	A root does not distribute over a sum.
$(x + 3)^2 = x^2 + 9$	$x^2 + 6x + 9$	The two cross-products contribute $6x$.
$(x^2 + 1) - (x - 2)$ $= x^2 - x - 1$	$x^2 - x + 3$	Subtracting -2 adds 2 .
Remainder 2 means add $+2$ to the quotient.	Add 2 divided by the original divisor.	The remainder still needs to be divided.

Verify a division result

For $(x^2 + 3x + 5)/(x + 1)$: quotient $x + 2$, remainder 3.
 $(x + 1)(x + 2) + 3 = x^2 + 3x + 5$.
The result is $x + 2 + 3/(x + 1)$, with $x \neq -1$.

When a step is wrong, name the rule that should replace it. Then retry a different question that uses the same rule.

LESSON 26 | PRACTICE, NOT THE GRADED CHECKPOINT

A short revision check

1. Simplify $(2a^3)^2/a^4$, with $a \neq 0$.
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2. Simplify $\sqrt{(75)}$, then evaluate $8^{2/3}$.
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3. Simplify $(3x^2 - x + 2) - (x^2 + 4x - 5)$.
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4. Expand $(x - 2)(x + 5)$.
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5. Divide $(x^2 + 4x + 6)$ by $(x + 2)$. State the restriction and check by multiplication.
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My correction log

Error type	My next action
Exponent / root / sign / missing product / division	
The rule I need to use	
The lesson and fresh question I will revisit	

LESSON 26 | WORKED ANSWERS AND NEXT STEPS

Check, correct and move forward

1. $(2a^3)^2/a^4 = 4a^6/a^4 = 4a^2$, keeping $a \neq 0$.

2. $\sqrt{(75)} = \sqrt{(25 \times 3)} = 5\sqrt{(3)}$. Also, $8^{2/3} = (8^{1/3})^2 = 2^2 = 4$.

3. $3x^2 - x + 2 - x^2 - 4x + 5 = 2x^2 - 5x + 7$.

4. $x^2 + 5x - 2x - 10 = x^2 + 3x - 10$.

5. Subtract $x(x + 2)$ to leave $2x + 6$; subtract $2(x + 2)$ to leave 2. Result: $x + 2 + 2/(x + 2)$, with $x \neq -2$. Check: $(x + 2)(x + 2) + 2 = x^2 + 4x + 6$.

Choose one repair, then test it

Revisit Class 21 for exponent laws, Class 22 for roots, Class 23 for signs and like terms, Class 24 for products, or Class 25 for division. Cover the worked answer and try a fresh question. Explain the rule as you use it.

Ready for the next chapter

- ☐ I can distinguish a sum, product, power and quotient.
- ☐ I can explain a correction, not just copy it.
- ☐ I can retain restrictions and verify an equivalent form.

Chapter 5 starts Tuesday, February 2, 2027: factoring and quadratic functions. Curriculum focus: A.10A-D, A.11A-B.