Sets & Steps
Math Practice & Worked Solutions

Algebra 1

Zero Exponents

Zero Exponents | A1-U07-P04

96 problems · Four activity formats

Topic focus

Across 96 tasks this topic asks for exact value, condition, or boundary-aware conclusion with justification.

8 PDFs and a README; 50 buyer pages.

The following pages use the same questions, given data, and notation as the final files. Question/card serial numbers and internal IDs are omitted in this preview only. Table values and matching responses are retained. Full answer keys are not included.

Published by Tusils LLC.

Algebra 1

Zero Exponents

Name: _____ **Date:** _____ **Class:** _____

Answer each question and record the matching bank letter. Give exact values. Give the whole requested response, including any reasoning the question asks for.

Evaluate $(4-11)^0$. First compute the expression that forms the base; then decide whether the zero power is defined. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____	Evaluate $((3)(6)-18)^0$ under the real-number zero-exponent convention used in this course. Explain the boundary case. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____
Evaluate $-(-5)^0$. State which operations are outside the exponent's scope. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____	Evaluate 3^0+11^0. Replace only each defined zero-powered group by 1 and retain every operation outside that group. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____
Evaluate $6^0-(-4)^0$. Replace only each defined zero-powered group by 1 and retain every operation outside that group. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____	Evaluate $\frac{8}{5^0}$. Replace only each defined zero-powered group by 1 and retain every operation outside that group. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____
Evaluate $(2\cdot 5)^0+3$. Replace only each defined zero-powered group by 1 and retain every operation outside that group. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____	Find the exact real domain of $((2x+3)(x-4))^0$. Account for every way the complete base can be zero or undefined. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions. Bank label: _____

Algebra 1

Zero Exponents

Name: _____ **Date:** _____ **Class:** _____

Answer each question and show your reasoning in the workspace. Give exact values rather than decimals unless the question supplies a decimal. Give the whole requested response, including any reasoning the question asks for.

Evaluate $((-3)^2 + 1)^0$. First compute the expression that forms the base; then decide whether the zero power is defined.	Evaluate $((\frac{14}{7}) - 5)^0$. First compute the expression that forms the base; then decide whether the zero power is defined.
Evaluate $2^0 \cdot 9^0$. Replace only each defined zero-powered group by 1 and retain every operation outside that group.	Evaluate $4(6^0 + 10^0)$. Replace only each defined zero-powered group by 1 and retain every operation outside that group.
Evaluate $2(3 + 4)^0$. Replace only each defined zero-powered group by 1 and retain every operation outside that group.	Evaluate $3 - 2(-7)^0$. Replace only each defined zero-powered group by 1 and retain every operation outside that group.

Algebra 1

Zero Exponents

Name: _____ **Date:** _____ **Class:** _____

Begin at START. Answer the card, then find the matching final answer at the top of another card. Use the recording sheet for your reasoning. Visit each card once and continue to FINISH.

Incoming: undefined

For which real x is $(x-3)^0$ defined? Give the restriction before simplifying the power. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

Incoming: $-\frac{1}{2}$

Determine whether $0(4-4)^0$ is defined. Do not let an outside factor or operation hide a zero base. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

Incoming: -1

Evaluate $4 \cdot 3^0$. State which operations are outside the exponent's scope. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

Incoming: 5

Evaluate $\frac{3^0}{7}$. Replace only each defined zero-powered group by 1 and retain every operation outside that group. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

START

Evaluate $((2^3)-3)^0$. First compute the expression that forms the base; then decide whether the zero power is defined. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

Incoming: all real x except x = 7

Find the exact real domain of $((x-2)(x+5))^0$. Account for every way the complete base can be zero or undefined. Use the complete requested value, domain, or coefficient conditions as the matching response and retain the original explanation and restrictions.

Your response: _____

Algebra 1

Zero Exponents

Name: _____ **Date:** _____ **Class:** _____

Evaluate the supplied statement or method. Say whether it is correct, repair it if it is not, and verify the result exactly. Not every prompt contains an error.

Evaluate 2^0. Identify the entire base before applying the zero-exponent rule. Choose a justified first step: apply the nonzero-base rule directly if its condition is already established, or first evaluate/check the entire base to establish whether the rule applies. Explain your choice for this expression, then give its value or explain why it is undefined.

Evaluate $(-2)^0$. Identify the entire base before applying the zero-exponent rule. Choose a justified first step: apply the nonzero-base rule directly if its condition is already established, or first evaluate/check the entire base to establish whether the rule applies. Explain your choice for this expression, then give its value or explain why it is undefined.

Evaluate $(\frac{1}{2})^0$. Identify the entire base before applying the zero-exponent rule. Choose a justified first step: apply the nonzero-base rule directly if its condition is already established, or first evaluate/check the entire base to establish whether the rule applies. Explain your choice for this expression, then give its value or explain why it is undefined.

Evaluate $(-\frac{3}{4})^0$. Identify the entire base before applying the zero-exponent rule. Choose a justified first step: apply the nonzero-base rule directly if its condition is already established, or first evaluate/check the entire base to establish whether the rule applies. Explain your choice for this expression, then give its value or explain why it is undefined.

Zero Exponents

Full Worked Solutions - excerpt

Worked example

Problem. Determine whether $5 + 0(9 - 9)^0$ is defined. Do not let an outside factor or operation hide a zero base.

Answer. undefined

Explanation and check.

The powered base is zero, so the product term is undefined before the outside zero can act; hence the whole sum is undefined.

Worked example

Problem. Determine whether $-2((3 \cdot 3 - 9)^0) + 7$ is defined. Do not let an outside factor or operation hide a zero base.

Answer. undefined

Explanation and check.

The grouped base $3 \cdot 3 - 9$ equals zero. External multiplication and addition cannot make that zero power defined.