

Gas optimization quizz

src/01. ArithmeticOperators.sol:Addition contract

Deployment Cost	Deployment Size
117342	223

Function Name	min	avg	median	max	# calls
addition	26501	26501	26501	26501	1

src/01. ArithmeticOperators.sol:AdditionOptimized contract

Deployment Cost	Deployment Size
106300	172

Function Name	min	avg	median	max	# calls
addition	26409	26409	26409	26409	1

src/01. ArithmeticOperators.sol:Division contract

Deployment Cost	Deployment Size
103623	259

Function Name	min	avg	median	max	# calls
divisionBy128	313	313	313	313	1
divisionBy2	335	335	335	335	1

src/01. ArithmeticOperators.sol:DivisionOptimized contract

Deployment Cost	Deployment Size
92371	206

src/01.

**ArithmeticOperators.sol:DivisionOptimized
contract**

Function Name	min	avg	median	max	# calls
divisionBy128	239	239	239	239	1
divisionBy2	261	261	261	261	1

src/01.

**ArithmeticOperators.sol:Subtraction
contract**

Deployment Cost	Deployment Size				
117342	223				
Function Name	min	avg	median	max	# calls
subtraction	26501	26501	26501	26501	1

src/01.

**ArithmeticOperators.sol:SubtractionOptimized
contract**

Deployment Cost	Deployment Size				
106312	172				
Function Name	min	avg	median	max	# calls
subtraction	26409	26409	26409	26409	1

**src/02. ArrayLength.sol:ArrayLength
contract**

Deployment Cost	Deployment Size				
359435	467				
Function Name	min	avg	median	max	# calls
callFor	3676	3676	3676	3676	1

src/02.

**ArrayLength.sol:ArrayLengthOptimized
contract**

src/02.

ArrayLength.sol:ArrayLengthOptimized

contract

Deployment Cost	Deployment Size				
358139	461				
Function Name	min	avg	median	max	# calls
callFor	2840	2840	2840	2840	1

src/03. CalldataMemory.sol:CalldataMemory

contract

Deployment Cost	Deployment Size				
157257	509				
Function Name	min	avg	median	max	# calls
add	3183	3183	3183	3183	1

src/03.

CalldataMemory.sol:CalldataMemoryOptimized

contract

Deployment Cost	Deployment Size				
148615	469				
Function Name	min	avg	median	max	# calls
add	2653	2653	2653	2653	1

src/04. Loops.sol:Loops contract

Deployment Cost	Deployment Size				
118763	330				
Function Name	min	avg	median	max	# calls
loopDoWhile	1933	1933	1933	1933	1
loopFor	2639	2639	2639	2639	1
loopWhile	2056	2056	2056	2056	1

src/04. Loops.sol:LoopsOptimized contract

Deployment Cost	Deployment Size				
97767	231				
Function Name	min	avg	median	max	# calls
loopDoWhile	583	583	583	583	1
loopFor	1278	1278	1278	1278	1
loopWhile	706	706	706	706	1

src/05. PackVariables.sol:PackVariables contract

Deployment Cost	Deployment Size				
175287	592				
Function Name	min	avg	median	max	# calls
setValues	150820	150820	150820	150820	1

src/05. PackVariables.sol:PackVariablesOptimized contract

Deployment Cost	Deployment Size				
178041	605				
Function Name	min	avg	median	max	# calls
setValues	128945	128945	128945	128945	1

src/06. Errors.sol:Errors contract

Deployment Cost	Deployment Size				
118601	241				
Function Name	min	avg	median	max	# calls
call	2355	2355	2355	2355	1

src/06. Errors.sol:ErrorsOptimized contract

src/06. Errors.sol:ErrorsOptimized contract

Deployment Cost	Deployment Size				
91764	217				
Function Name	min	avg	median	max	# calls
call	202	202	202	202	1

src/07. Swap.sol:Swap contract

Deployment Cost	Deployment Size				
110343	291				
Function Name	min	avg	median	max	# calls
swap	543	543	543	543	1

src/07. Swap.sol:SwapOptimized contract

Deployment Cost	Deployment Size				
89345	192				
Function Name	min	avg	median	max	# calls
swap	279	279	279	279	1

src/08. ArrayType.sol:ArrayType contract

Deployment Cost	Deployment Size				
90631	198				
Function Name	min	avg	median	max	# calls
initArray	4499416	4499416	4499416	4499416	1

src/08. ArrayType.sol:ArrayTypeOptimized contract

Deployment Cost	Deployment Size				
4491136	184				
Function Name	min	avg	median	max	# calls

**src/08. ArrayType.sol:ArrayTypeOptimized
contract**

initArray	97	97	97	97	1
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src/09. NestedIf.sol:NestedIf contract

Deployment Cost	Deployment Size				
96483	225				
Function Name	min	avg	median	max	# calls
call	341	349	352	352	4

**src/09. NestedIf.sol:NestedIfOptimized
contract**

Deployment Cost	Deployment Size				
93019	209				
Function Name	min	avg	median	max	# calls
call	303	322	327	330	4

**src/10. MultiSigWallet.sol:MultiSigWallet
contract**

Deployment Cost	Deployment Size				
870739	4127				
Function Name	min	avg	median	max	# calls
confirmTransaction	31229	86606	76994	124376	8
executeTransaction	31273	31273	31273	31273	1
getConfirmations	12011	12011	12011	12011	1
getTransactionCount	325	325	325	325	1
owners	2600	3266	2600	4600	3
receive	0	0	0	0	8
required	2360	2360	2360	2360	1
submitTransaction	31461	92741	102943	103015	7
transactions	1296	1296	1296	1296	4

src/10.

**MultiSigWallet.sol:MultiSigWalletOptimized
contract**

Deployment Cost	Deployment Size				
837874	3606				
Function Name	min	avg	median	max	# calls
confirmTransaction	23686	76905	74883	97629	8
executeTransaction	23730	23730	23730	23730	1
getConfirmations	6253	6253	6253	6253	1
getTransactionCount	347	347	347	347	1
owners	2600	3266	2600	4600	3
receive	0	0	0	0	8
required	2360	2360	2360	2360	1
submitTransaction	23940	83994	93991	94063	7

transactions

	968	968	968	968	4
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Ran 1 test for test/02. ArrayLength.t.sol:ArrayLengthOptimizedTest

[PASS] test_Call() (gas: 8117)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.39ms (1.58ms CPU time)

Ran 1 test for test/02. ArrayLength.t.sol:ArrayLengthsTest

[PASS] test_Call() (gas: 8953)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.38ms (1.60ms CPU time)

Ran 1 test for test/03. CalldataMemory.t.sol:CalldataMemoryTest

[PASS] test_Call() (gas: 32491)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.40ms (1.61ms CPU time)

Ran 1 test for test/08. ArrayType.t.sol:ArrayTypeTest

[PASS] test_init() (gas: 4504651)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.52ms (1.74ms CPU time)

Ran 1 test for test/07. Swap.t.sol:SwapTest

[PASS] test_swap() (gas: 9053)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.64ms (1.85ms CPU time)

Ran 1 test for test/07. Swap.t.sol:SwapOptimizedTest

[PASS] test_swap() (gas: 8789)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.66ms (1.85ms CPU time)

Ran 4 tests for test/01. ArithmeticOperators.t.sol:ArithmeticOperatorsTest

[PASS] test_Addition() (gas: 31671)

[PASS] test_DivisionBy128() (gas: 5521)

[PASS] test_DivisionBy2() (gas: 5553)

[PASS] test_Subtraction() (gas: 31651)

Suite result: ok. 4 passed; 0 failed; 0 skipped; finished in 12.71ms (1.30ms CPU time)

Ran 4 tests for test/01. ArithmeticOperators.t.sol:ArithmeticOperatorsOptimizedTest

[PASS] test_Addition() (gas: 31579)

[PASS] test_DivisionBy128() (gas: 5447)

[PASS] test_DivisionBy2() (gas: 5479)

[PASS] test_Subtraction() (gas: 31559)

Suite result: ok. 4 passed; 0 failed; 0 skipped; finished in 12.74ms (1.33ms CPU time)

Ran 1 test for test/06. Errors.t.sol:ErrorsOptimizedTest

[PASS] test_call() (gas: 8974)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 12.91ms (2.07ms CPU time)

Ran 1 test for test/06. Errors.t.sol:ErrorsTest

[PASS] test_call() (gas: 11127)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 13.51ms (2.63ms CPU time)

Ran 3 tests for test/04. Loops.t.sol:LoopsOptimizedTest

[PASS] test_doWhile() (gas: 5838)

[PASS] test_for() (gas: 6556)

[PASS] test_while() (gas: 5961)

Suite result: ok. 3 passed; 0 failed; 0 skipped; finished in 858.71μs (43.67μs CPU time)

Ran 3 tests for test/04. Loops.t.sol:LoopsTest

[PASS] test_doWhile() (gas: 7188)

[PASS] test_for() (gas: 7917)

[PASS] test_while() (gas: 7311)

Suite result: ok. 3 passed; 0 failed; 0 skipped; finished in 1.13ms (58.71μs CPU time)

Ran 1 test for test/09. NestedIf.t.sol:NestedIfOptimizedTest

[PASS] test_call() (gas: 8026)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 1.15ms (25.75μs CPU time)

Ran 1 test for test/08. ArrayType.t.sol:ArrayTypeOptimizedTest

[PASS] test_init() (gas: 5330)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 1.28ms (12.67μs CPU time)

Ran 1 test for test/09. NestedIf.t.sol:NestedIfTest

[PASS] test_call() (gas: 8135)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 1.33ms (28.79µs CPU time)

Ran 1 test for test/03. CalldataMemory.t.sol:CalldataMemoryOptimizedTest

[PASS] test_Call() (gas: 31961)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 1.35ms (28.71µs CPU time)

Ran 1 test for test/05. PackVariables.t.sol:PackVariablesOptimizedTest

[PASS] test_set() (gas: 137473)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 2.56ms (847.13µs CPU time)

Ran 1 test for test/05. PackVariables.t.sol:PackVariablesTest

[PASS] test_set() (gas: 159348)

Suite result: ok. 1 passed; 0 failed; 0 skipped; finished in 2.31ms (1.16ms CPU time)

Ran 8 tests for test/10. MultiSigWallet.t.sol:MultiSigWalletOptimizedTest

[PASS] testConfirmTransaction() (gas: 190279)

[PASS] testExecuteTransaction() (gas: 282207)

[PASS] testExecutionFailure() (gas: 282698)

[PASS] testInitialization() (gas: 31858)

[PASS] testOnlyOwnerCanConfirm() (gas: 129118)

[PASS] testOnlyOwnerCanExecute() (gas: 305000)

[PASS] testOnlyOwnerCanSubmit() (gas: 32405)

[PASS] testSubmitTransaction() (gas: 109344)

Suite result: ok. 8 passed; 0 failed; 0 skipped; finished in 6.30ms (18.03ms CPU time)

Ran 8 tests for test/10. MultiSigWallet.t.sol:MultiSigWalletTest

[PASS] testConfirmTransaction() (gas: 207449)

[PASS] testExecuteTransaction() (gas: 320802)

[PASS] testExecutionFailure() (gas: 281482)

[PASS] testInitialization() (gas: 31858)

[PASS] testOnlyOwnerCanConfirm() (gas: 145679)

[PASS] testOnlyOwnerCanExecute() (gas: 350849)

[PASS] testOnlyOwnerCanSubmit() (gas: 39992)

[PASS] testSubmitTransaction() (gas: 119564)