Subtracting Integers

Spot mistakes, reason, and work backward

Name _____ **Date** _____ **Score** _____ / 10

QUICK REVIEW

Subtracting means adding the opposite: $a - b = a + (-b)$. For example, $-3 - (-8) = -3 + 8 = 5$; $4 - 7 = -3$. A number-line move for subtraction is opposite to the sign of the subtracted number.

Worked example

Evaluate $(-3) - (2)$. Show an exact fraction or integer.

1. Use denominator 1: $-3 = -3/1$ and $2 = 2/1$.
2. Combine the signed numerators: $-3 - (2) = -5$.
3. The value is $-5/1 = -5$.
Answer: -5.

Practice Problems

Show your thinking.

1. Morgan claims $(-7) - (3) = 10$. Locate the sign error and give the correct value.

2. For $(5) - (-9)$, Jules drops the negative sign on the second number and gets -4. Correct the rewrite and the result.

3. Reconstruct x from $x - (-2) = -4$. Check by substitution.

4. Test whether $((8) - (-4)) + (-12) = 0$. Show the numerical cancellation.

5. Find $(-3) - (7)$. Is the result strictly between -11 and 11?

6. In $[(4) - (-6)] - (4)$, a student skips the brackets and reports 10. Finish the missing subtraction.

7. Find x if $-x = (-8) - (5)$. Explain why the final sign must change.

8. Compare $2[(9) - (-3)]$ with $(9) - (-3)$. Find both and state their difference.

9. In $[(-14) - (9)] - (-14)$, a student skips the brackets and reports -23. Finish the missing subtraction.

10. Find x if $-x = (17) - (-8)$. Explain why the final sign must change.

Answer Key

1. -10, not 10.
2. $(5)+(9)=14$.
3. $x=-6$.
4. Yes; the sum is 0.
5. -10; yes.
6. 6.
7. $x=13$.
8. 24 and 12; first minus second 12.
9. -9.
10. $x=-25$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. Use denominator 1: $-7=-7/1$ and $3=3/1$.
2. Combine the signed numerators: $-7-(3)=-10$.
3. The value is $-10/1=-10$.
4. The claim 10 differs from the computed value -10, so its sign is not correct.

Problem 2

1. Dropping the sign gives $(5)-(9)=-4$, a different problem.
2. Subtracting -9 adds its opposite: $(5)-(-9)=(5)+(9)$.
3. Compute $(5)+(9)=14$.

Problem 3

1. Add back the amount that was subtracted.
2. $x=(-4)+(-2)=-6$.
3. Check in the original: $(-6)-(-2)=-4$.

Problem 4

1. Use denominator 1: $8=8/1$ and $-4=-4/1$.
2. Combine the signed numerators: $8-(-4)=12$.
3. The value is $12/1=12$.
4. $12+(-12)=0$.

Problem 5

1. Use denominator 1: $-3=-3/1$ and $7=7/1$.
2. Combine the signed numerators: $-3-(7)=-10$.
3. The value is $-10/1=-10$.
4. Its magnitude is $10<11$, so $-11<-10<11$.

Problem 6

1. Use denominator 1: $4=4/1$ and $-6=-6/1$.
2. Combine the signed numerators: $4-(-6)=10$.
3. The value is $10/1=10$.
4. The omitted step is $10-(4)=6$.

Problem 7

1. Use denominator 1: $-8=-8/1$ and $5=5/1$.
2. Combine the signed numerators: $-8-(5)=-13$.
3. The value is $-13/1=-13$.
4. $-x=-13$ gives $x=13$; check $-(13)=-13$.

Problem 8

1. Use denominator 1: $9=9/1$ and $-3=-3/1$.
2. Combine the signed numerators: $9-(-3)=12$.
3. The value is $12/1=12$.
4. Double is $2(12)=24$; difference $24-(12)=12$.

Problem 9

1. Use denominator 1: $-14=-14/1$ and $9=9/1$.
2. Combine the signed numerators: $-14-(9)=-23$.
3. The value is $-23/1=-23$.
4. The omitted step is $-23-(-14)=-9$.

Problem 10

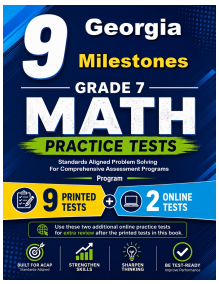
1. Use denominator 1: $17=17/1$ and $-8=-8/1$.
2. Combine the signed numerators: $17-(-8)=25$.
3. The value is $25/1=25$.
4. $-x=25$ gives $x=-25$; check $-(-25)=25$.

TESTINAR

Keep Building Grade 7 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 7 books



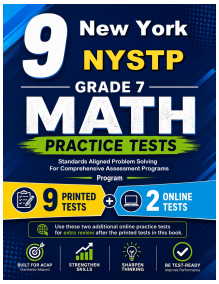
GEORGIA MILESTONES

9 Full-Length Math Practice Tests

Build Grade 7 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



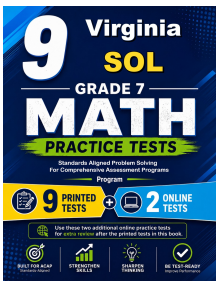
NEW YORK NYSTP

9 Full-Length Math Practice Tests

Build Grade 7 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook



VIRGINIA SOL

9 Full-Length Math Practice Tests

Build Grade 7 accuracy, confidence, and test stamina with 9 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 7 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/7