

## Adding Integers

RULE 1. If the addends have the same sign, add the two numbers and prefix their common sign.

$$(+62) + (+14) = +76 \quad (-29) + (-13) = -42$$

RULE 2. If the addends have different signs, find the difference between the two numbers and prefix the sign of the number that is the greater distance from zero.

$$(+15) + (-8) = +7 \quad (+9) + (-30) = -21$$

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### Some Practice Problems

1.  $(-5) + (-6) =$

3.  $(-3) + (-6) =$

5.  $(-2) + (-8) =$

7.  $(-9) + (+10) =$

9.  $(+12) + (+10) =$

11.  $(-29) + (-11) =$

13.  $(+42) + (-19) =$

15.  $(+31) + (-56) =$

17.  $-8 + 10 =$

19.  $75 + (-25) =$

21.  $73 + 47 =$

23.  $78 + (-30) =$

25.  $75 + (-25) =$

27.  $200 + 100 =$

29.  $355 + (-163) =$

31.  $34 + (-16) =$

33.  $72 + (-12) =$

35.  $1/2 + -1/2 =$

37.  $1/4 + (-1/2) =$

39.  $1/4 + -1/2 =$

41.  $16 + 16 =$

43.  $3 + (-8) + 7 =$

45.  $12 + 5 + (-8) + 20 + (-16) =$

2.  $(+9) + (-4) =$

4.  $(-4) + (-4) =$

6.  $(-7) + (+1) =$

8.  $(-8) + (-5) =$

10.  $(+13) + (-17) =$

12.  $(-36) + (+24) =$

14.  $(-33) + (+42) =$

16.  $(+65) + (+15) =$

18.  $7 + (-18) =$

20.  $33 + (-22) =$

22.  $86 + (-58) =$

24.  $100 + 50 =$

26.  $150 + 50 =$

28.  $132 + (-181) =$

30.  $900 + 200 =$

32.  $14 + 43 =$

34.  $4 + 17 =$

36.  $7 + (-7) =$

38.  $-1/4 + 1/4 =$

40.  $17 + 4 =$

42.  $2436 + (-1064) =$

44.  $11 + 5 + (-2) =$

45.  $12 + 5 + (-8) + 20 + (-16) =$

## Answer Key for Adding Integers

1. -11
2. 5
3. -9
4. -8
5. -10
6. -6
7. 1
8. -13
9. 22
10. -4
11. -40
12. -12
13. 23
14. 9
15. -25
16. 80
17. 2
18. -11
19. 50
20. -55
21. -26
22. 28
23. -108
24. -50
25. -100
26. 200
27. -100
28. -49
29. 192
30. 1100
31. -50
32. 57
33. 60
34. 13
35. 0
36. 0
37.  $-1/4$
38. 0
39.  $-3/4$
40. -13
41. 0
42. 1372
43. 2
44. 14
45. 13

## Rules for Subtracting Integers

RULE 1. Because every subtraction problem can be rewritten as a corresponding addition problem, use the following rule: To subtract an integer, add its opposite.

1.  $(-8) - (+9) =$  The opposite of  $+9$  is  $-9$ . Change sign to opposite:  $(-8) + (-9) = -17$  using integer addition rules

RULE 1 examples:

1.  $(+7) - (+4) = (+7) + (-4) = +3$

2.  $(+5) - (-6) = (+5) + (+6) = +11$

3.  $(-3) - (+8) = (-3) + (-8) = -11$

Alternate RULE 1. To subtract signed numbers:

- a. Change double negatives to a positive.
- b. Get a sum of terms with like signs and keep the given sign, using the sign in front of the number as the sign of the number.
- c. Find the difference when terms have different signs and use the sign of the larger numeral.

Alternate RULE 1 examples:

1.  $7 - (-5) = 7 + 5 = 12$  (a. Change double negatives to positive, use integer addition rules)
  2.  $-5 - 9 = -14$  (using the signs in front of the numbers, use only addition rules-signs are alike, add and keep the sign)
  3.  $6 - 7 = -1$  (using the signs in front of the numbers, use addition rules-signs are different, subtract and take the sign of the largest numeral)
  4.  $6 - 7 + 3 - 4 - 2 = 9 - 13 = -4$  (Get the sum of the terms with like signs, use addition rules)
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## Some Practice Problems

1.  $5 - (-8) =$
2.  $-7 - (+8) =$
3.  $-9 - (+4) =$
4.  $9 - (-2) =$
5.  $-1 - 6 =$
6.  $1 - (-9) =$
7.  $-4 - 5 =$
8.  $3 - 10 =$
9.  $-8 - (-4) =$
10.  $4 - 6 =$
11.  $8 - (-9) =$
12.  $-10 - 10 =$
13.  $10 - (-10) =$
14.  $10 - 10 =$
15.  $25 - (-15) =$
16.  $-33 - (-49) =$
17.  $8 - 7 =$
18.  $-6 - 8 =$
19.  $-3 - (-7) =$
20.  $14 - (-6) =$
21.  $5 - 11 =$
22.  $-8 - 6 =$
23.  $-11 - (-4) =$
24.  $13 - (-16) =$
25.  $-6 - (-10) =$
26.  $-7 - 0 =$
27.  $6 - 13 =$
28.  $-17 - 81 =$
29.  $10 - (7 - 9) =$
30.  $6 - (-9 + 7) =$
31.  $6 + (-8 - 7) =$
32.  $14 - (18 - 40) =$

## Answer Key for Subtracting Integers

1. 13
2. -15
3. -13
4. 11
5. -7
6. 10
7. -9
8. -7
9. -4
10. -2
11. 17
12. -20
13. 20
14. 0
15. 40
16. 16
17. 1
18. -14
19. 4
20. 20
21. -6
22. -14
23. -7
24. 29
25. 4
26. -7
27. -7
28. -98
29. 12
30. 8
31. -9
32. 36