

1-3 Add and Subtract Real Numbers

Name _____

Date _____

Add: $-29\frac{1}{3} + 17\frac{1}{2}$

$|-29\frac{1}{3}| - |17\frac{1}{2}|$ ← Subtract the lesser absolute value from the greater absolute value.

$29\frac{2}{6} - 17\frac{3}{6}$ ← Rename fractions using the LCD: 6.

$28\frac{8}{6} - 17\frac{3}{6}$ ← Regroup $29\frac{2}{6}$ as $28\frac{8}{6}$.

$11\frac{5}{6}$ ← Simplify.

$-11\frac{5}{6}$ ← The addend with the greater absolute value is negative. So the sum is negative.

Remember: When adding with *like signs*, use the sign of both addends for the sum.

Subtract: $-16.34 - (-19.58)$

$-16.34 + 19.58$ ← Add the opposite of the subtrahend.

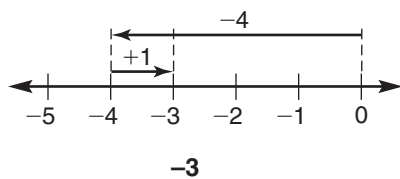
$|19.58| + |-16.34|$ ← Apply the rules for adding with unlike signs.

$19.58 - 16.34$

3.24 ← Simplify using the sign of the addend with the greater absolute value.

Add or subtract using a number line.

1. $-4 + 1$



2. $-6 + 2$

3. $8 + (-7)$

4. $-1.6 + (-3.2)$

5. $-2.35 + (-2.35)$

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

7. $-5 - 2 + (-7)$

8. $6\frac{1}{4} - (-1\frac{1}{4}) + 2\frac{1}{2}$

9. $-7\frac{1}{3} - (-2\frac{1}{3}) - (-3\frac{1}{3})$



Write each subtraction problem as an addition problem. Then find the sum.

10. $1.3 - 7.1$

11. $3.5 - 9.7$

12. $-3.21 - 6.4$

13. $-5.99 - 14.33$

$$\begin{array}{l} 1.3 + (-7.1) \\ |-7.1| - |1.3| = 5.8 \\ 1.3 - 7.1 = -5.8 \end{array}$$

14. $-4\frac{1}{2} - (-\frac{1}{2})$

15. $-5\frac{2}{3} - (-\frac{7}{8})$

16. $2\frac{2}{5} - (-3\frac{7}{10})$

17. $6\frac{3}{4} - (-2\frac{1}{2})$

Estimate by rounding. Then add or subtract using rules for signed numbers.

18. $6.4 + (-3.5)$

19. $7.1 + (-5.6)$

20. $5.3 - 8.6$

21. $11.2 - 13.1$

$$\begin{array}{l} 6 + (-4) = 2 \\ |6.4| - |-3.5| = 2.9 \\ |6.4| > |-3.5| \\ 2.9 \end{array}$$

22. $-3\frac{1}{4} + (-2\frac{3}{8})$

23. $-2\frac{1}{5} + (-3\frac{7}{10})$

24. $\frac{1}{4} - (-2\frac{1}{4})$

25. $\frac{1}{6} - (-7\frac{2}{3})$

26. $-8.8 - 7.6$

27. $-9.3 - 4.2$

28. $-62 - (-141)$

29. $-93 - (-358)$

Problem Solving

30. The temperature at midnight was 52.8°F . It dropped 9.5°F overnight and then rose 15.2°F by noon. What was the change in temperatures between midnight and noon?

31. Two numbers have a sum of 2 and a difference of -16 . What are the numbers?

CRITICAL THINKING

32. Lonnie says that the sign of the sum of two numbers is always the sign of the greater number. Explain why Lonnie is wrong and give an example.