Name: **School:** **Grade:** **Class:**

11-3 Subtracting Integers - Practice and Problem Solving

Subtract. Use counters if necessary.

9. $6 - 5$

$$\begin{aligned} 6-5 &= 6+(-5) \\ &= 1 \end{aligned}$$

11. $15 - 8$

$$\begin{aligned} 15-8 &= 15+(-8) \\ &= 7 \end{aligned}$$

13. $+8 - 1$

$$\begin{aligned} +8-1 &= +8+(-1) \\ &= +7 \text{ or } 7 \end{aligned}$$

15. $-8 - (-4)$

$$\begin{aligned} -8-(-4) &= -8+4 \\ &= -4 \end{aligned}$$

17. $-9 - (-6)$

$$\begin{aligned} -9-(-6) &= -9+6 \\ &= -3 \end{aligned}$$

19. $-2 - (-2)$

$$\begin{aligned} -2-(-2) &= -2+2 \\ &= 0 \end{aligned}$$

21. $-6 - 2$

$$\begin{aligned} -6-2 &= -6+(-2) \\ &= -8 \end{aligned}$$

Name: School: Grade: Class:

23. –5 – 4

$$\begin{aligned} -5-4 &= -5+(-4) \\ &= -9 \end{aligned}$$

25. –15 – 5

$$\begin{aligned} -15-(-5) &= -15+(-5) \\ &= -20 \end{aligned}$$

27. **STATISTICS** For a class project, Mykia recorded the outside temperature for five nights. Find the range of his data:–3°F, 7°F, –5°F, 9°F, and 12°F.

Range is the difference between the maximum and minimum temperatures.

$$\begin{aligned} 12-(-5) &= 12+5 \\ &= 17 \end{aligned}$$

The range is 17°F.

29. **ALGEBRA** Find the value of $m - n$ if $m = -3$ and $n = 4$.

$$\begin{aligned} m-n &= -3-4 \\ &= -3+(-4) \\ &= -7 \end{aligned}$$

31. **OPEN ENDED** Find two negative integers, a and b, where $a - b$ is positive.

Sample answer: $a = -8$ and $b = -10$

CHALLENGE Find the value of each expression if the value of $x - y = 2$ and $x + y = 8$. Explain.

33. $x + (-y)$

2; Sample answer: $x + (-y) = x - y$ and $x - y = 2$.

35. $x - (-y)$

8; Sample answer: $x - (-y) = x + y$ and $x + y = 8$.

37. **WRITING IN MATH** Is the difference between two integers with different signs always negative? Explain.

no; Sample answer: A positive integer minus a negative integer is positive.

Name: School: Grade: Class:

39. In a video game, Juliana had –11 points. On her next turn, she lost an additional 4 points. Which integer represents her score now?

F 15 points
G 7 points
H –7 points
J –15 points

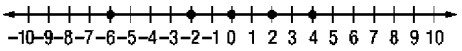
J; $-11 + -4 = -15$

Add. Use counters or a number line if necessary.

41. 4 + (–4)

$4 + (-4) = 0$

43. Order –6, 2, 0, –2, and 4 on the same number line.



Write each fraction as a percent.

45. $\frac{3}{2}$

Write the fraction as a decimal, then multiply by 100.

$$\frac{3}{2} \cdot 100 = 1.5 \cdot 100$$
$$= 150\%$$

47. $\frac{7}{5}$

Write the fraction as a decimal, then multiply by 100.

$$\frac{7}{5} \cdot 100 = 1.4 \cdot 100$$
$$= 140\%$$

49. **SHOES** The shoe sizes of the boy's basketball team are 11, 10, 15, 9, 17, 12, and 10. What is the average shoe size of the boy's basketball team?

$$\text{Average} = \frac{11 + 10 + 15 + 9 + 17 + 12 + 10}{7}$$
$$= \frac{84}{7}$$
$$= 12$$

The average shoe size is 12.

PREREQUISITE SKILL Multiply.

Name: **School:** **Grade:** **Class:**

51. 8×7

$8 \times 7 = 56$

53. 8×9

$8 \times 9 = 72$