

Name _____

Find the sum without the use of a number line.

1) $-12 + (-12)$

2) $-22 + (-7)$

3) $-8 + 4$

4) $20 + (-4)$

5) $3 + (-20)$

6) $4 + (-20)$

7) $-61 + 46$

8) $23 + (-9)$

9) $-2.1 + (-0.1)$

10) $-\frac{7}{9} + \left(-\frac{1}{9}\right)$

11) $-\frac{4}{9} + \left(-\frac{2}{9}\right)$

12) $\left(\frac{2}{3}\right) + \left(-\frac{4}{9}\right)$

13) $18 + (-17) + (-12)$

14) $6 + (-25) + (-8)$

15) $5 + 22 + (-19)$

16) $-8 + 19 + (-24)$

17) $-4 + (-21) + (-17) + (-5)$

18) $11 + (-13) + 1 + (-22)$

19) $20 + (-19) + 12 + (-5)$

20) $-3 + (-19) + (-3) + (-13) + 3 + (-20)$

21) $-11 + (-9) + (-20) + (-19) + 9 + (-7)$

22) $22 + (-9)$

23) $21 + (-10)$

Simplify the algebraic expression.

24) $3(6y - 7) + 7$

25) $-2x + 5x$

26) $9y + (-5y)$

27) $-7a + (-2a)$

28) $3x + (-8) + (-6x) + 4$

29) $-4 + 2x + 1 + (-6x)$

30) $2(5y - 9) + 9$

31) $9(4y - 3) + 3$

32) $3(5y - 4) + 4$

33) $6(2x - 7) - 4x + 10$

34) $5(2x - 10) - 4x + 6$

35) $6(7 - 9a) + 7(7a - 5)$

36) $10(3 - 4a) + 3(8a - 7)$

Solve.

37) A deep-sea diver dives from the surface to 142 feet below the surface. She then dives down 15 more feet. Find the diver's depth.

38) A deep-sea diver dives from the surface to 100 feet below the surface. She then dives down 25 more feet. Find the diver's depth.

39) A deep-sea diver dives from the surface to 125 feet below the surface. She then dives down 11 more feet. Find the diver's depth.

40) A deep-sea diver dives from the surface to 189 meters below the surface and then swims up 8 meters, down 19 meters, down another 26 meters, and then up 22 meters. Find the diver's depth after these movements.

41) A deep-sea diver dives from the surface to 150 meters below the surface and then swims up 9 meters, down 16 meters, down another 28 meters, and then up 21 meters. Find the diver's depth after these movements.

42) A deep-sea diver dives from the surface to 231 meters below the surface and then swims up 7 meters, down 18 meters, down another 29 meters, and then up 24 meters. Find the diver's depth after these movements.

43) City A has an elevation of 9977 feet above sea level while city B has an elevation of 149 feet below sea level. Find the difference in elevation between those two cities.

44) City A has an elevation of 10,790 feet above sea level while city B has an elevation of 124 feet below sea level. Find the difference in elevation between those two cities.

$$54) 5 - 4y - 8 - 8y$$

45) City A has an elevation of 9890 feet above sea level while city B has an elevation of 109 feet below sea level. Find the difference in elevation between those two cities.

$$55) 4 - (-4x) + 8x - (-8)$$

$$56) 4 + 2y - 6y$$

46) City A has an elevation of 12,628 feet above sea level while city B has an elevation of 142 feet below sea level. Find the difference in elevation between those two cities.

$$57) 4x - 10 - 6x$$

$$58) 3 - 4y - 4 - 8y$$

47) City A has an elevation of 9846 feet above sea level while city B has an elevation of 115 feet below sea level. Find the difference in elevation between those two cities.

$$59) 6 - 2y - 9 - 9y$$

$$60) 5 - (-3x) + 8x - (-1)$$

Simplify the algebraic expression.

$$48) 3x - 7x$$

$$61) 2 + 4y - 6y$$

$$49) 2x - 8x$$

$$62) 4x - 9 - 5x$$

$$50) 3x - 6x$$

$$63) 4 - 2y - 1 - 9y$$

$$51) 4 + 2y - 6y$$

$$64) 7 - (-4x) + 9x - (-6)$$

$$52) 2 + 5y - 7y$$

$$65) 4 - (-4x) + 9x - (-5)$$

$$53) 8x - 10 - 2x$$

$$66) 4 - (-2x) + 6x - (-5)$$

Answer Key

Testname: Q02PREP_1.5TO1.6V02

- 1) -24
- 2) -29
- 3) -4
- 4) 16
- 5) -17
- 6) -16
- 7) -15
- 8) 14
- 9) -2.2
- 10) $-\frac{8}{9}$
- 11) $-\frac{2}{3}$
- 12) $\frac{2}{9}$
- 13) -11
- 14) -27
- 15) 8
- 16) -13
- 17) -47
- 18) -23
- 19) 8
- 20) -55
- 21) -57
- 22) 13
- 23) 11
- 24) $18y - 14$
- 25) $3x$
- 26) $4y$
- 27) $-9a$
- 28) $-3x - 4$
- 29) $-4x - 3$
- 30) $10y - 9$
- 31) $36y - 24$
- 32) $15y - 8$
- 33) $8x - 32$
- 34) $6x - 44$
- 35) $-5a + 7$
- 36) $-16a + 9$
- 37) 157 feet below the surface
- 38) 125 feet below the surface
- 39) 136 feet below the surface
- 40) 204 meters below the surface
- 41) 164 meters below the surface
- 42) 247 meters below the surface
- 43) 10,126 ft
- 44) 10,914 ft
- 45) 9999 ft
- 46) 12,770 ft

Answer Key

Testname: Q02PREP_1.5TO1.6V02

47) 9961 ft

48) $-4x$

49) $-6x$

50) $-3x$

51) $4 - 4y$

52) $2 - 2y$

53) $6x - 10$

54) $-3 - 12y$

55) $12 + 12x$

56) $4 - 4y$

57) $-2x - 10$

58) $-1 - 12y$

59) $-3 - 11y$

60) $6 + 11x$

61) $2 - 2y$

62) $-1x - 9$

63) $3 - 11y$

64) $13 + 13x$

65) $9 + 13x$

66) $9 + 8x$