

Chapter 1 Odd Number Problem Answers

1. $<$
3. $>$
5. $<$
7. $<$
9. $>$

Order from smallest to largest:

11. $-1, |0|, |-2|, 3, 7, |-11|$
13. $-5, -2, 0, 1, |-6|, |-7|, |11|$

Simplify without using a calculator:

15. -2
17. -21
19. 4
21. -42
23. -7
25. -9
27. -12
29. -5
31. -45
33. -40
35. -63
37. -9
39. -9
41. -7
43. -20
45. 125
47. 16
49. 64
51. -16
53. $= 2 + 15 = 17$
55. $= 3 + (-6) = -3$
57. $= 4 - 7 = -3$
59. $= -3 - 5 \cdot 5 = -3 - 25 = -28$
61. $= -10 - 4 \cdot (-4) = -10 - (-16) = -10 + 16 = 6$
63. $= (3 - 16) - (8 - 10) = (-13) - (-2) = -11$
65. $= 3 + 2[4(2 - 9) - 2(5 - 16)] = 3 + 2[4(-7) - 2(-11)] = 3 + 2[-28 + 22] = 3 + 2[-6] = 3 + (-12) = -9$
67. $= 12 - 3[3(8 - 8) - 2(15 - 9)] = 12 - 3[2 \cdot 0 - 2 \cdot 6] = 12 - 3[0 - 12] = 12 - 3[-12] = 12 + 36 = 48$

$$69. = 3\{5 - 2[3] - 3[-4 + 4 \cdot 3]\} = 3\{5 - 6 - 3[-4 + 12]\} = 3\{5 - 6 - 3[8]\} = 3\{5 - 6 - 24\} = 3\{-25\} \\ = -75$$

$$71. = -4\{2[-10] - 4[8 + 4(-8)]\} = -4\{-20 - 4[8 + (-32)]\} = -4\{-20 - 4[-24]\} \\ = -4\{-20 + 96\} = -4\{76\} = -304$$

73. Maria started the month with \$800. Each of the four weeks, she spent \$230 on household expenses plus \$275 on entertainment and eating out. How much did she have to borrow from her roommate to make it to the end of the month?

$$= \$800 - 4(\$230 + \$275) = \$800 - 4(\$505) = \$800 - \$2020 = -\$1220$$

Maria has to borrow from roommate \$1220

75. Rome was founded in 753 BC. The United States declared independence in 1776 AD. Use the appropriate negative number with subtraction to find the difference in time between the founding of Rome and the Declaration of Independence. Hint: Do not forget to take into account that there is no year 0 since we went from 1 BC to 1 AD.

$$= 1776 - (-753) - 1 = 2528 \text{ years}$$