

section 1.2

1.2 (1)

$$\begin{aligned} 60-a) \quad & -|-9| < |-9| \\ & -(9) \uparrow (9) \\ & -9 < 9 \end{aligned}$$

$$\begin{aligned} 60-b) \quad & -8 < |-8| \\ & \uparrow \\ & -8 < 8 \end{aligned}$$

$$\begin{aligned} 60-c) \quad & |-1| > -1 \\ & \uparrow \\ & +1 > -1 \end{aligned}$$

$$\begin{aligned} 60-d) \quad & -(-14) > -|-14| \\ & \uparrow \\ & +14 > -(14) \end{aligned}$$

$$\begin{aligned} 62-a) \quad & -|-4| = -|4| \\ & \uparrow \\ & -(4) = -(4) \end{aligned}$$

$$\begin{aligned} 62-b) \quad & 5 > -|-5| \\ & \uparrow \\ & 5 > -(5) \end{aligned}$$

$$\begin{aligned} 62-c) \quad & -|-10| = -10 \\ & \uparrow \\ & -(10) = -10 \end{aligned}$$

$$\begin{aligned} 62-d) \quad & -|-0| = -(-0) \\ & \uparrow \\ & -(0) \uparrow 0 \\ & 0 = 0 \end{aligned}$$

$$\begin{aligned} 64) \quad & |17-8| - |13-4| \\ & = |9| - |9| \\ & = (9) - (9) \\ & = \underline{\underline{0}} \end{aligned}$$

$$\begin{aligned} 66) \quad & 15 - |3(8-5)| \\ & = 15 - |3(3)| \\ & = 15 - |9| \\ & = 15 - (9) \\ & = \underline{\underline{6}} \end{aligned}$$

$$68) 27 - |19 + 4(3-1) - 7|$$

$$= 27 - |19 + 4(2) - 7|$$

$$= 27 - |19 + 8 - 7|$$

$$= 27 - |20|$$

$$= 27 - (20)$$

$$= \underline{\underline{7}}$$

$$70) 13 - 2|11 - 2(5-2)|$$

$$= 13 - 2|11 - 2(3)|$$

$$= 13 - 2|11 - 6|$$

$$= 13 - 2|5|$$

$$= 13 - 2(5)$$

$$= 13 - 10$$

$$= \underline{\underline{3}}$$

$$72-a) -5 + (-9) = \underline{\underline{-14}}$$

$$72-b) -5 + 9 = \underline{\underline{4}} \quad | \quad 72-c) 5 + (-9) = \underline{\underline{-4}}$$

$$74) 34 + (-19) = \underline{\underline{15}}$$

$$76) -17 + (-18) + 6$$

$$= -35 + 6$$

$$= \underline{\underline{-29}}$$

$$78) 24 + 3(-5 + 9)$$

$$= 24 + 3(4)$$

$$= 24 + 12$$

$$= \underline{\underline{36}}$$

$$80-a) 15 - 8 = \underline{\underline{7}}$$

$$80-b) -15 - (-8)$$

$$= -15 + 8 = \underline{\underline{-7}}$$

$$80-c) -15 - 8 = \underline{\underline{-23}}$$

$$80-d) 15 - (-8)$$

$$= 15 + 8 = \underline{\underline{23}}$$

$$82) -58 - (-67)$$

$$= -58 + 67$$

$$= \underline{\underline{9}}$$

$$84) 64 + (-17) - 9$$

$$= 64 - 26$$

$$= \underline{\underline{38}}$$

$$86-a) 35 - 16 = \underline{\underline{19}}$$

$$86-b) 35 + (-16) = \underline{\underline{19}}$$

$$\begin{aligned} 88-a) 46 - (-37) \\ = 46 + 37 = \underline{\underline{83}} \end{aligned}$$

$$88-b) 46 + 37 = \underline{\underline{83}}$$

$$\begin{aligned} 90) (1-8) - (2-9) \\ = (-7) - (-7) \\ = -7 + 7 \\ = \underline{\underline{0}} \end{aligned}$$

$$\begin{aligned} 92) - (4-5) - (7-8) \\ = -(-1) - (-1) \\ = +1 + 1 \\ = \underline{\underline{2}} \end{aligned}$$

$$\begin{aligned} 94) 32 - [5 - (15 - 20)] \\ = 32 - [5 - (-5)] \\ = 32 - [5 + 5] \\ = 32 - 10 \\ = \underline{\underline{22}} \end{aligned}$$

$$96) a) -3 \cdot 9 = \underline{\underline{-27}}$$

$$b) 9(-7) = \underline{\underline{-63}}$$

$$c) 35 \div (-7) = -5$$

$$d) -84 \div (-6) = 14$$

$$98) a) -36 \div 4 = \underline{\underline{-9}}$$

$$b) -192 \div 12 = \underline{\underline{-16}}$$

$$c) 9(-7) = \underline{\underline{-63}}$$

$$d) -1(-19) = \underline{\underline{19}}$$

$$\begin{aligned} 100-a) (-3)^5 &= (-3)(-3)(-3)(-3)(-3) \\ &= \underline{\underline{-243}} \end{aligned}$$

$$\begin{aligned} 100-b) -3^5 &= -(3)(3)(3)(3)(3) \\ &= \underline{\underline{-243}} \end{aligned}$$

$$102) 8(-4) + 5(-4) - 6$$

$$= -32 - 20 - 6$$

$$= \underline{\underline{-58}}$$

$$104) -4(-6)(3)$$

$$= -4(-18)$$

$$= \underline{\underline{72}}$$

$$106) (6-11)(8-13)$$

$$= (-5)(-5)$$

$$= \underline{\underline{25}}$$

$$108) 23 - 2(4-6)$$

$$= 23 - 2(-2)$$

$$= 23 + 4$$

$$= \underline{\underline{27}}$$

$$110) 52 \div (-4) + (-32) \div (-8)$$

$$= (-13) + 4$$

$$= \underline{\underline{-9}}$$

$$112) 11 - 3[7 - 4(-2)]$$

$$= 11 - 3[7 + 8]$$

$$= 11 - 3[15]$$

$$= 11 - 45$$

$$= \underline{\underline{-34}}$$

$$114) 7 - |5 - 3(4-1) - 6|$$

$$= 7 - |5 - 3(3) - 6|$$

$$= 7 - |5 - 9 - 6|$$

$$= 7 - |-10|$$

$$= 7 - (10)$$

$$= \underline{\underline{-3}}$$

$$116) 5 - 2|2(1-4) - (2-5)|$$

$$= 5 - 2|2(-3) - (-3)|$$

$$= 5 - 2|-6 + 3|$$

$$= 5 - 2|-3|$$

$$= 5 - 2(3)$$

$$= 5 - 6$$

$$= \underline{\underline{-1}}$$

$$118) (-4)^2 - 32 \div (12-4)$$

$$= 16 - 32 \div (8)$$

$$= 16 - 4$$

$$= \underline{\underline{12}}$$

$$120) x + (-21)$$

$$a) x = -27 \quad (-27) + (-21) = \underline{\underline{-48}}$$

$$b) x = 44 \quad (44) + (-21) = \underline{\underline{23}}$$

$$122) y = -3, z = 15$$

$$(y+z)^2 = ((-3) + (15))^2 = (12)^2 = \underline{\underline{144}}$$

$$124) m = -4, n = -9$$

$$7m - 4n - 2 = 7(-4) - 4(-9) - 2 = -28 + 36 - 2 = 36 - 30 = \underline{\underline{6}}$$

$$126) x = -3, y = -2$$

$$4x^2 - xy + 3y^2 = 4(-3)^2 - (-3)(-2) + 3(-2)^2$$

$$= 4(9) - 6 + 3(4)$$

$$= 36 - 6 + 12$$

$$= \underline{\underline{42}}$$