

Book

$$\begin{aligned} 78) \quad a+7b & \text{ where, } a=-3 \text{ and } b=-6 \\ & = -3 + 7(-6) \\ & = -3 - 42 \\ & = -45 \end{aligned}$$

$$\begin{aligned} 80) \quad 9p + 4t + w & \text{ where, } p=2 \\ & \quad \quad \quad t=6 \\ & \quad \quad \quad w=-50 \\ & = 9(2) + 4(6) + (-50) \\ & = 18 + 24 - 50 \\ & = 42 - 50 \\ & = -8 \end{aligned}$$

$$\begin{aligned} 82) \quad w + 2y - z & \text{ where, } w=-9 \\ & \quad \quad \quad y=10 \\ & \quad \quad \quad z=-3 \\ & = -9 + 2(10) - (-3) \\ & = -9 + 20 + 3 \\ & = 11 + 3 \\ & = 14 \end{aligned}$$

$$\begin{aligned} 84) \quad -5pq & \text{ where, } p=-4 \\ & \quad \quad \quad q=-2 \\ & = -5(-4)(-2) \\ & = 20(-2) \\ & = -40 \end{aligned}$$

$$88) -|-m|$$

$$\text{where, } m = -15$$

$$= -|-(-15)|$$

$$= -|15|$$

$$= -15$$

$$90) n^2$$

$$\text{where, } n = -9$$

$$= (-9)^2$$

$$= 81$$

$$92) -n^2$$

$$\text{where, } n = -9$$

$$= -(-9)^2$$

$$= -(81)$$

$$= -81$$

Practice Assessment unit 3

$$42a) \frac{-5(3)^2 - 3(4)}{-6(8-12) \div (-3)}$$

$$= \frac{-5(9) - 3(4)}{-6(-4) \div (-3)}$$

$$= \frac{-45 - 12}{24 \div (-3)}$$

$$= \frac{-57}{-8}$$

$$= \frac{57}{8}$$

$$42b) \frac{7-4^2}{9 \div 3(9-12)}$$

$$= \frac{7-16}{9 \div 3(-3)}$$

$$= \frac{-9}{3(-3)}$$

$$= \frac{-9}{-9}$$

$$= 1$$

$$\begin{aligned} 43a) \quad 2x - 7y & \quad \text{where, } x = -4 \\ & \quad \quad \quad y = -2 \\ & = 2(-4) - 7(-2) \\ & = -8 + 14 \\ & = 6 \end{aligned}$$

$$\begin{aligned} 43b) \quad 2y - 5x \\ & = 2(-2) - 5(-4) \\ & = -4 + 20 \\ & = 16 \end{aligned}$$

$$\begin{aligned} 44a) \quad -b - 8c & \quad \text{where, } c = 4 \\ & \quad \quad \quad b = -5 \\ & = -(-5) - 8(4) \\ & = 5 - 32 \\ & = -27 \end{aligned}$$

$$\begin{aligned} 44b) \quad -c - 5b \\ & = -(4) - 5(-5) \\ & = -4 + 25 \\ & = 21 \end{aligned}$$

$$45a) \frac{3m + 25n}{7s + 5}$$

$$= \frac{3(-3) + 25(3)}{7(1) + 5}$$

$$= \frac{-9 + 75}{7 + 5}$$

$$= \frac{66}{12}$$

$$= \frac{11}{2}$$

where, $m = -3$
 $n = 3$
 $s = 1$

$$45b) \frac{-3m + 4n}{5 - 2s}$$

$$= \frac{-3(-3) + 4(3)}{5 - 2(1)}$$

$$= \frac{9 + 12}{5 - 2}$$

$$= \frac{21}{3}$$

$$= 7$$

$$46) A = \pi r^2$$

$$\pi \approx 3.14$$

$$r = 9 \text{ in}$$

$$A = (3.14)(9 \text{ in})^2$$

$$= 3.14(81 \text{ in}^2)$$

$$= 254.34 \text{ in}^2$$

$$47) V = \frac{4\pi r^3}{3}$$

$$\pi \approx 3.14$$

$$r = 6 \text{ in}$$

$$V = \frac{4(3.14)(6 \text{ in})^3}{3}$$

$$= \frac{4(3.14)(216 \text{ in}^3)}{3}$$

$$= \frac{2712.96 \text{ in}^3}{3}$$

$$= 904.32 \text{ in}^3$$