

12:00pm 1/11/21 ACHA3000 2104322 p.91

1.)

(i) $x^6 \times x^8 \times x^2 \times x$

$$6+8+2=16 \quad 16+1=17$$

$$x = \boxed{x^{17}}$$

(ii) $(2x^2)^4 \times 3x^3$

$$16x^8 \times 3x^3$$

$$16 \times 3 = 48$$

$$8+3=11$$

$$= \boxed{48x^{11}}$$

(iii) $\frac{x^2 \times x^{10} \times x}{x^3}$

$$x^{10} \div x^3 = x^7$$

$$x^2 + x^7 + x = x^{10}$$

$$= \boxed{x^{10}}$$

(iv) $2\sqrt{x} \times 3\sqrt{x}$

2.)

i) $7x-1=5x+4$

$$(4-1)=(5x-7x)$$

~~$$37x=5x$$~~

$$5x-7x=2x$$

$$2x=5$$

$$x = \frac{5}{2} = \boxed{-2.5}$$

ii) $10(3x+2) = 7(-2x-1)$

$$10(3x+2) = 30x+20$$

$$7(-2x-1) = -14x-7$$

$$30x+20 = -14x-7$$

$$30x+20-20 = -14x-7-20$$

$$30x = -14x-27$$

$$30x+14x = -14x-27+14x$$

$$44x = -27$$

$$\frac{44x}{44} = \frac{-27}{44}$$

$$x = \frac{-27}{44}$$