

Practice using the Rules and Axioms
*Abbreviations explained in notes on
Fundamental operations.

Ex) follow the directions in the
order given

$$\frac{7(3x-1)}{2} = 5+x$$

$M_2, D.A., S_{2x}, A_7, D_{19}$

$$1) M_2: \quad 2 \left[\frac{7(3x-1)}{2} \right] = (5+x) 2$$

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

$$2) D.A.: \quad 7(3x-1) = 10+2x$$

$$21x-7 = 10+2x$$

$$3) S_{2x}: \quad 21x-7-2x = 10+2x-2x$$

$$19x-7 = 10$$

$$4) A_7: \quad 19x-7+7 = 10+7$$

$$19x = 17$$

$$5) D_{19}: \quad \frac{19x}{19} = \frac{17}{19}$$

$$\frac{19x}{19} = \frac{17}{19}$$

$$\boxed{x = \frac{17}{19}}$$

Ex) Follow the directions in the order given

$$\frac{7x+1}{2} + 3 = 14$$

$$\text{D.A.}, \text{C.L.T.}, S_{3\frac{1}{2}}, D_{\frac{7}{2}}$$

1) D.A.: $\frac{7x+1}{2} + 3 = 14$

$$\frac{7x}{2} + \frac{1}{2} + 3 = 14$$

2) C.L.T. $\frac{7x}{2} + \frac{1}{2} + \frac{6}{2} = 14$

$$\frac{7x}{2} + \frac{7}{2} = 14$$

3) $S_{3\frac{1}{2}}$: $\frac{7x}{2} + \frac{7}{2} - \frac{7}{2} = 14 - \frac{7}{2}$

$$* 3\frac{1}{2} = \frac{7}{2}$$

$$\frac{7x}{2} = \frac{28}{2} - \frac{7}{2}$$

$$\frac{7x}{2} = \frac{21}{2}$$

4) $D_{\frac{7}{2}}$: $\frac{7x}{2} \div \frac{7}{2} = \frac{21}{2} \div \frac{7}{2}$

$$\frac{7x}{2} \cdot \frac{2}{7} = \frac{21}{2} \cdot \frac{2}{7}$$

$$x = \frac{21}{7}$$

$$\boxed{x = 3}$$

Classwork: # 1-13, pg 60