



**FIGURE 9-35**

Levai's 12 possible epicyclic trains (3)

- †9-63 Figure 9-35b (p. 495) shows (schematically) a compound epicyclic train. The tooth numbers are 50, 25, 35, and 90 for gears 2, 3, 4, and 5, respectively. The arm is driven at 180 rpm CW and gear 5 is fixed to ground. Determine the speed and direction of gear 2. What is the efficiency of this train if the basic gearsets have  $E_0 = 0.98$ ?
- †9-64 Figure 9-35h (p. 495) shows (schematically) a compound epicyclic train. The tooth numbers are 80, 20, 25, and 85 for gears 2, 3, 4, and 5, respectively. Gear 2 is driven at 200 rpm CCW and the arm is fixed to ground. Determine the speed and direction of gear 5. What is the efficiency of this train if the basic gearsets have  $E_0 = 0.98$ ?
- †9-65 Figure 9-35i (p. 495) shows (schematically) a compound epicyclic train. The tooth numbers are 24, 18, 20, and 90 for gears 2, 3, 4, and 5, respectively. The arm is driven at 100 rpm CCW and gear 2 is fixed to ground. Determine the speed and direction of gear 5. What is the efficiency of this train if the basic gearsets have  $E_0 = 0.98$ ?