H-Model:

The **H-Model** is a valuation method used to estimate the intrinsic value of a share when the dividend growth rate transitions from a high abnormal growth rate (g_a) to a stable normal growth rate (g_n) over a finite period. It is particularly applicable for companies in a transitional growth phase.

Key Features of the H-Model:

1. **Two-Stage Growth Assumption**:
   - Initially, the dividend growth rate (g_a) is higher than the normal long-term growth rate (g_n).
   - This abnormal growth rate declines linearly over a period of $2H$ years until it stabilizes at g_n.

2. **Formula**: The H-Model computes the intrinsic value of a share (P_0) using the following formula:

$$P_0 = \frac{D_0(1+g_n)}{r-g_n} + \frac{D_0 H(g_a-g_n)}{r-g_n}$$

Where:

- P_0: Intrinsic value of the share
- D_0: Current dividend per share
- r: Required rate of return by investors
- g_a: Initial abnormal dividend growth rate
- g_n: Normal long-term dividend growth rate
- H: Half of the period during which the growth rate declines linearly ($2H = \text{full transition period}$)

3. **Components of the Formula**:
   - $\frac{D_0(1+g_n)}{r-g_n}$: Represents the value of the share assuming a constant normal growth rate (g_n).
   - $\frac{D_0H(g_a-g_n)}{r-g_n}$: Represents the premium added due to the temporary abnormal growth phase.
4. **Assumptions**:
   - The growth rate declines linearly from g_a to g_n over $2H$ years.
   - After $2H$ years, the dividend growth rate stabilizes at g_n.
   - Investors require a return (r) higher than the long-term growth rate (g_n).

Illustrative Example:

- Current Dividend (D_0): ₹5.00
- Initial Growth Rate (g_a): 20%
- Normal Growth Rate (g_n): 8%
- Required Rate of Return (r): 12%
- Transition Period ($2H$): 8 years ($H = 4$)

Step-by-Step Calculation:

1. **First Term**:

$$\frac{D_0(1+g_n)}{r-g_n} = \frac{5(1+0.08)}{0.12-0.08} = \frac{5.4}{0.04} = 135.00$$

2. **Second Term**:

$$\frac{D_0H(g_a-g_n)}{r-g_n} = \frac{5\times 4\times (0.20-0.08)}{0.12-0.08} = \frac{5\times 4\times 0.12}{0.04} = \frac{2.4}{0.04} = 60.00$$

3. **Intrinsic Value (P_0)**:

$$P_0 = 135.00 + 60.00 = 195.00$$

Result: The intrinsic value of the share is **₹195.00**.

Caselet: Valuation of TechNova Ltd. Using the H-Model

TechNova Ltd., a promising technology firm, has been making headlines for its consistent growth in the industry. With a range of innovative products and a growing customer base, the company is currently experiencing a rapid expansion phase. However, market analysts predict that this high growth will slow down over time as the industry matures, eventually stabilizing at a sustainable rate.

The financial details of TechNova Ltd. for the current year are as follows:

- The dividend per share is ₹3.00.
- The current growth rate, reflecting the rapid expansion phase, is 50%.
- The long-term growth rate, which the company is expected to achieve after the industry stabilizes, is 12%.
- The transition period, during which the growth rate will decline linearly, is estimated to last 10 years.
- Investors require a return of 16% on their investment in the company.

The company's management is keen to estimate the intrinsic value of its shares based on the H-Model, which considers the gradual decline in the growth rate over the specified transition period before stabilizing.

Task:

1. Using the H-Model, calculate the intrinsic value of TechNova Ltd.'s shares.
2. Provide a step-by-step explanation of your calculations, showing how the transition growth and normal growth contribute to the overall valuation.

Caselet: Valuation of Zenith AgroTech Ltd.

Zenith AgroTech Ltd., a leading company in the agricultural technology sector, has experienced significant growth in recent years due to its innovative solutions for sustainable farming. However, industry experts anticipate that this growth will moderate as competitors enter the market and the sector matures.

The financial details for Zenith AgroTech Ltd. are as follows:

- The current dividend per share is ₹2.50.
- The company is currently growing at a rapid rate of 14%.
- This growth is expected to decline linearly over the next 5 years.
- After this period, the company is expected to stabilize at a normal growth rate of 6%.
- Investors require a return of 12% on their investment in the company.

The management of Zenith AgroTech Ltd. is keen to determine the intrinsic value of its shares using the H-Model, which accounts for the gradual decline in growth before stabilization.

Task:

1. Calculate the intrinsic value of Zenith AgroTech Ltd.'s shares using the H-Model.
2. Break down the calculation into components, showing the contribution of the stable growth phase and the transition growth phase to the overall valuation.

Caselet: Valuation of Summit Textiles Ltd.

Summit Textiles Ltd., a prominent player in the textile manufacturing sector, has experienced robust growth due to its strong presence in domestic and international markets. However, industry analysts anticipate that this high growth phase will taper off over time as the market becomes more competitive and demand stabilizes.

The company's financial highlights for the current year are as follows:

- The dividend per share is ₹10.00.
- The company is currently growing at a rapid rate of 12%.
- This growth is expected to decline linearly over the next 14 years.
- After this transition, the growth rate is expected to stabilize at 6%.
- Investors expect a 14% return on their investment in the company.

Summit Textiles Ltd. wants to estimate the intrinsic value of its shares, considering the gradual decline in growth rates over the transition period before reaching a stable growth phase.

Task:

1. Use the H-Model to calculate the intrinsic value of Summit Textiles Ltd.'s shares.
2. Break down your calculations into the value from the stable growth phase and the value from the declining growth phase during the transition.

Caselet: Valuation of Orion Foods Ltd.

Orion Foods Ltd., a leading company in the food processing industry, has been expanding rapidly due to its innovative product offerings and strong market presence. However, industry experts forecast that its current growth phase will gradually decline as competition intensifies and the market matures.

The financial details for Orion Foods Ltd. are as follows:

- The current dividend per share is ₹25.00.
- The company's current growth rate is 13%, attributed to its rapid expansion phase.
- This growth is expected to decline linearly over the next 12 years.

- Beyond this period, the growth rate is expected to stabilize at 7%.
- Investors require a return of 10% on their investment in the company.

The management of Orion Foods Ltd. seeks to determine the intrinsic value of its shares using the H-Model, which accounts for the gradual decline in the growth rate before stabilization.

Task:

1. Compute the intrinsic value of Orion Foods Ltd.'s shares using the H-Model.
2. Divide your calculations into components representing the stable growth phase and the declining growth phase.

Caselet: Valuation of Galaxy Motors Ltd.

Galaxy Motors Ltd., a well-known automobile company, has consistently achieved high growth due to its innovative electric vehicle line and strong consumer demand. However, industry experts expect that the company's growth rate will gradually decline as competitors enter the market and regulatory pressures increase.

The company's financial highlights for the current year are as follows:

- The dividend per share for the current year is ₹25.00.
- The current growth rate, reflecting the rapid expansion phase, is 13%.
- This growth is anticipated to decline linearly over the next 12 years.
- After the transition period, the growth rate is expected to stabilize at 7%.
- Investors require a 10% return on their investments in Galaxy Motors Ltd.

The company's management is looking to calculate the intrinsic value of its shares based on the H-Model, which incorporates both the declining growth phase and the stable growth phase in the valuation.

Task:

1. Calculate the intrinsic value of Galaxy Motors Ltd.'s shares using the H-Model.
2. Clearly distinguish the contributions of the stable growth phase and the declining growth phase to the overall valuation.

Caselet: Valuation of Alpine Beverages Ltd.

Alpine Beverages Ltd., a leading company in the premium bottled water and beverage segment, has achieved moderate but steady growth due to its strong brand recognition and innovative product offerings. The company is currently benefiting from a slightly higher growth rate due to increased consumer awareness and demand for healthier beverage options. However, industry

analysts predict that this growth will gradually slow down over the next few years as the market becomes more saturated and competition intensifies.

The company's financial highlights for the current year are as follows:

- The current dividend per share is ₹40.00.
- The rapid growth rate is currently at 8%, reflecting increased market demand.
- This growth is expected to decline linearly over the next 6 years.
- Beyond this transition period, the growth rate is anticipated to stabilize at 5%.
- Investors expect a 12% return on their investments in Alpine Beverages Ltd.

The management of Alpine Beverages Ltd. seeks to estimate the intrinsic value of its shares using the H-Model. This model incorporates both the declining growth phase and the stable growth phase in determining the valuation.

Task:

1. Calculate the intrinsic value of Alpine Beverages Ltd.'s shares using the H-Model.
2. Clearly outline the contributions of the stable growth phase and the declining growth phase to the overall valuation.