Draw a Dandelion with Drifting Seeds and a Tilted Stem

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a seed head 5 cm across with ten stalks and six pappus lines per fan. State the head diameter and the number of lines per fan.

Answer: A 5 cm circle with ten stalks ending in seed points, each with six straight pappus lines fanning outward. The outer tips form a rough circle.

Reason: Ten stalks distribute the fans evenly around the circle, and six lines per fan give a clear but not dense silhouette. Stating the values makes the drawing checkable.

Check: Measure the head diameter with a ruler and count the stalks and lines per fan. Confirm the outer tips stay within about 1 cm of the guide circle.

Task 2

Draw a stem tilted 15 degrees to the left from vertical. Add a vertical reference line and label the angle as a hypothetical example.

Answer: A gentle curved stem meeting the lower edge of the head and tilting 15 degrees left of a light vertical line. The angle is labeled as a hypothetical example.

Reason: Measuring from a vertical reference makes the tilt checkable. Labeling the value as hypothetical keeps the drawing honest about chosen numbers.

Check: Compare the stem to the vertical line with a protractor or folded corner. The measured angle should be within a few degrees of 15.

Task 3

Place three drifting seeds along a curved path at 3 cm, 6 cm, and 9 cm from the head edge. Draw each with a five-line fan rotated to follow the path.

Answer: A light curved path with three seed positions at 3 cm, 6 cm, and 9 cm from the head edge. Each seed has a seed point and five straight pappus lines rotated to match the local path direction.

Reason: Increasing distances show acceleration, and rotating the fans connects the seeds to the path. Five lines per fan keeps the structure consistent with the head.

Check: Measure the three distances from the head edge and confirm they increase. Check that each fan has five lines and that the fan direction changes along the path.

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Original tasks 4 / complete keys

Task 4

Draw a complete dandelion with a 7 cm head, a 25-degree stem tilt to the right, and two drifting seeds at 4 cm and 8 cm. List the three numerical values you used.

Answer: A 7 cm head with eight to twelve stalks and five to seven pappus lines per fan, a stem tilted 25 degrees right from vertical, and two drifting seeds at 4 cm and 8 cm from the head edge along a curved path. Values listed: 7 cm head, 25-degree tilt, 4 cm and 8 cm drift distances.

Reason: A larger head needs slightly more stalks to keep spacing even. The 25-degree tilt is steeper but still checkable against vertical. Two seeds at increasing distances keep the drift readable.

Check: Measure the head diameter, check the stem angle against a vertical line, and measure the two drift distances. Confirm the listed values match the drawing.

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Source rubric / reflection

- [ ] Seed head is circular and the pappus tips form a stable silhouette.
- [ ] Each seed fan uses five to seven straight lines with consistent spacing.
- [ ] Stem angle is measured from vertical and stated as a hypothetical value if changed.
- [ ] Three drifting seeds are placed at increasing distances along a curved path.
- [ ] Drifting seeds reuse the same fan structure and are rotated to follow the path.
- [ ] Units are consistent and any numerical values are labeled as hypothetical examples.

Reflection: What did you check, what did you change, and what will you try next?