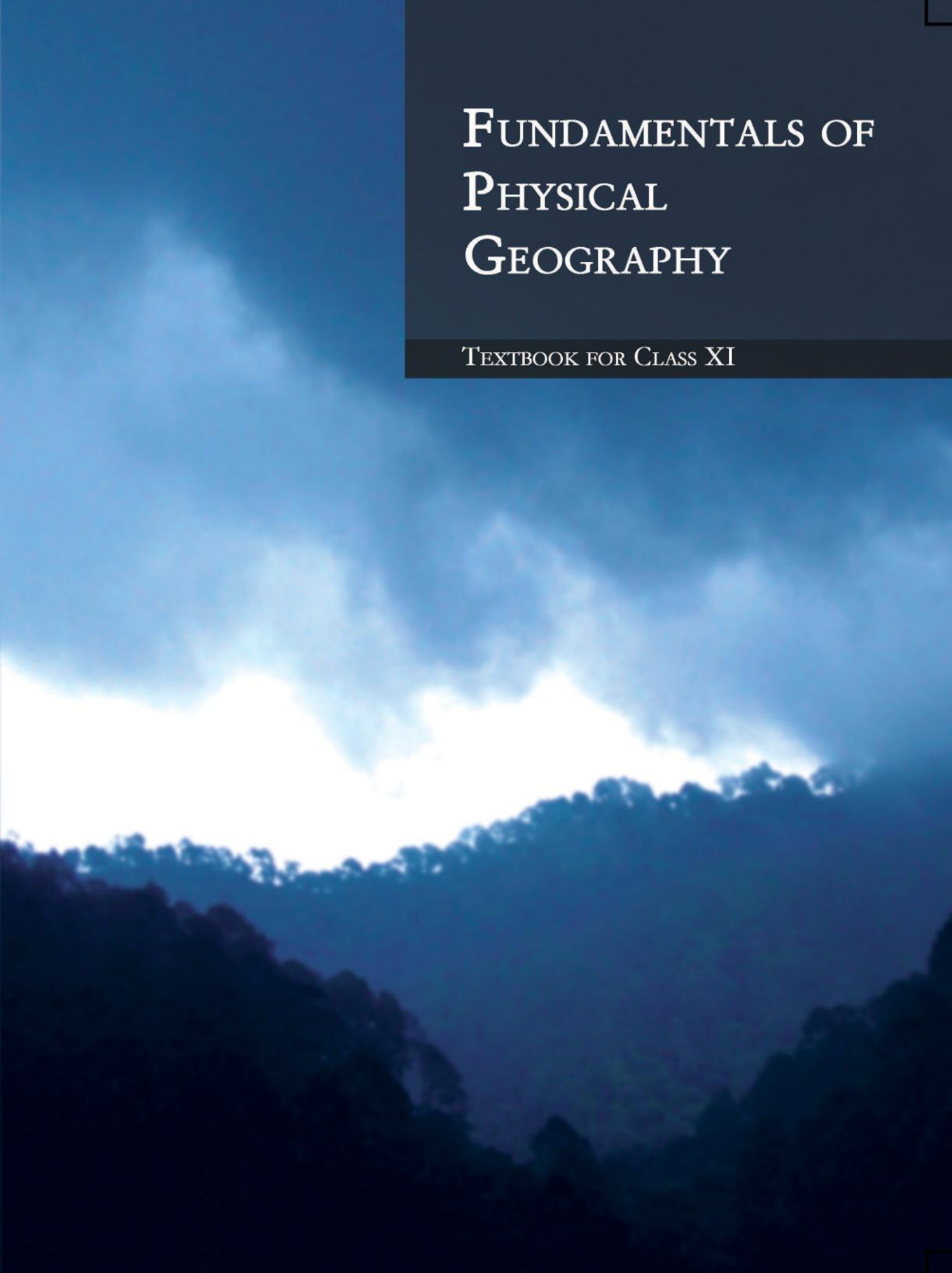
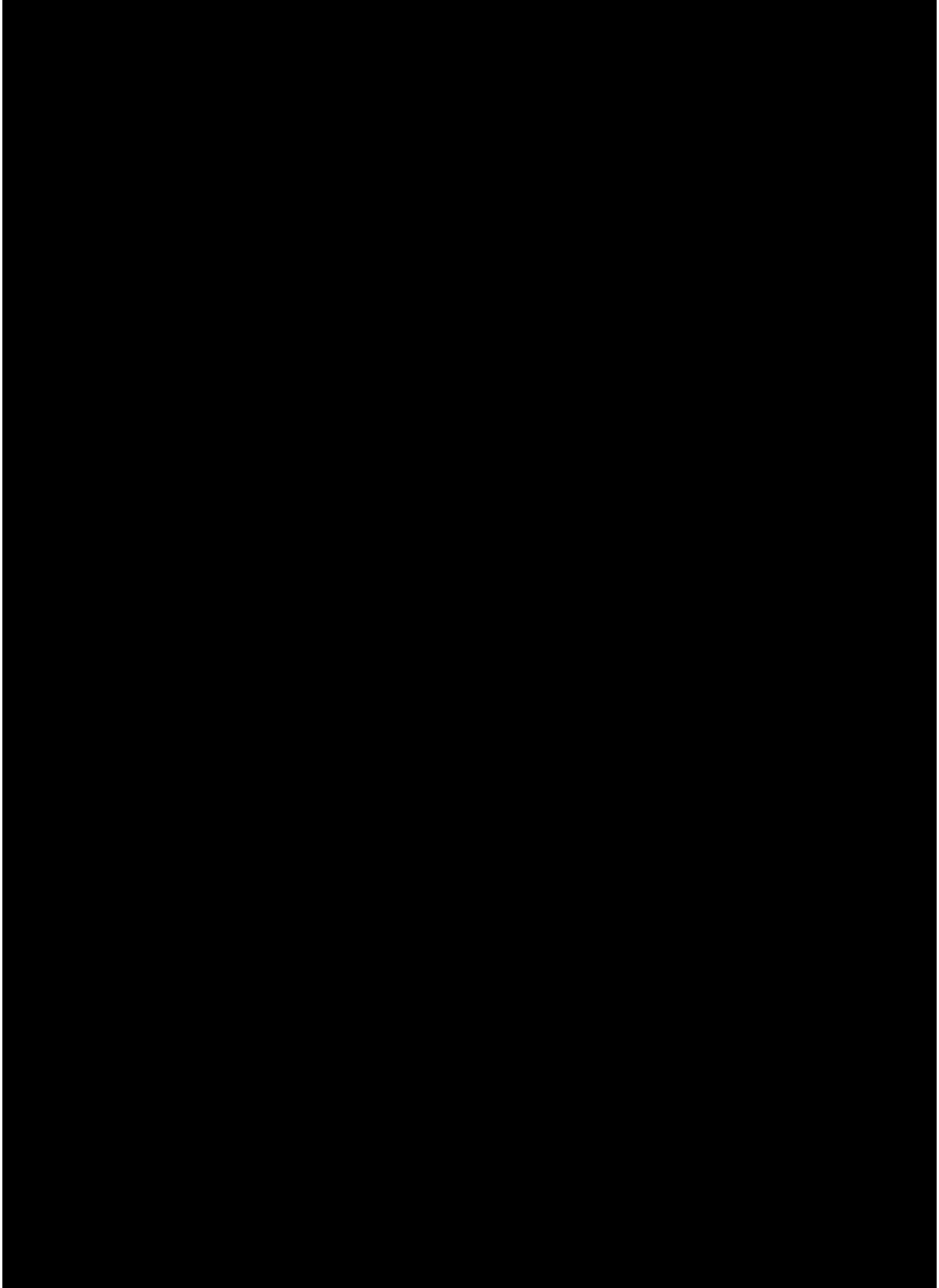
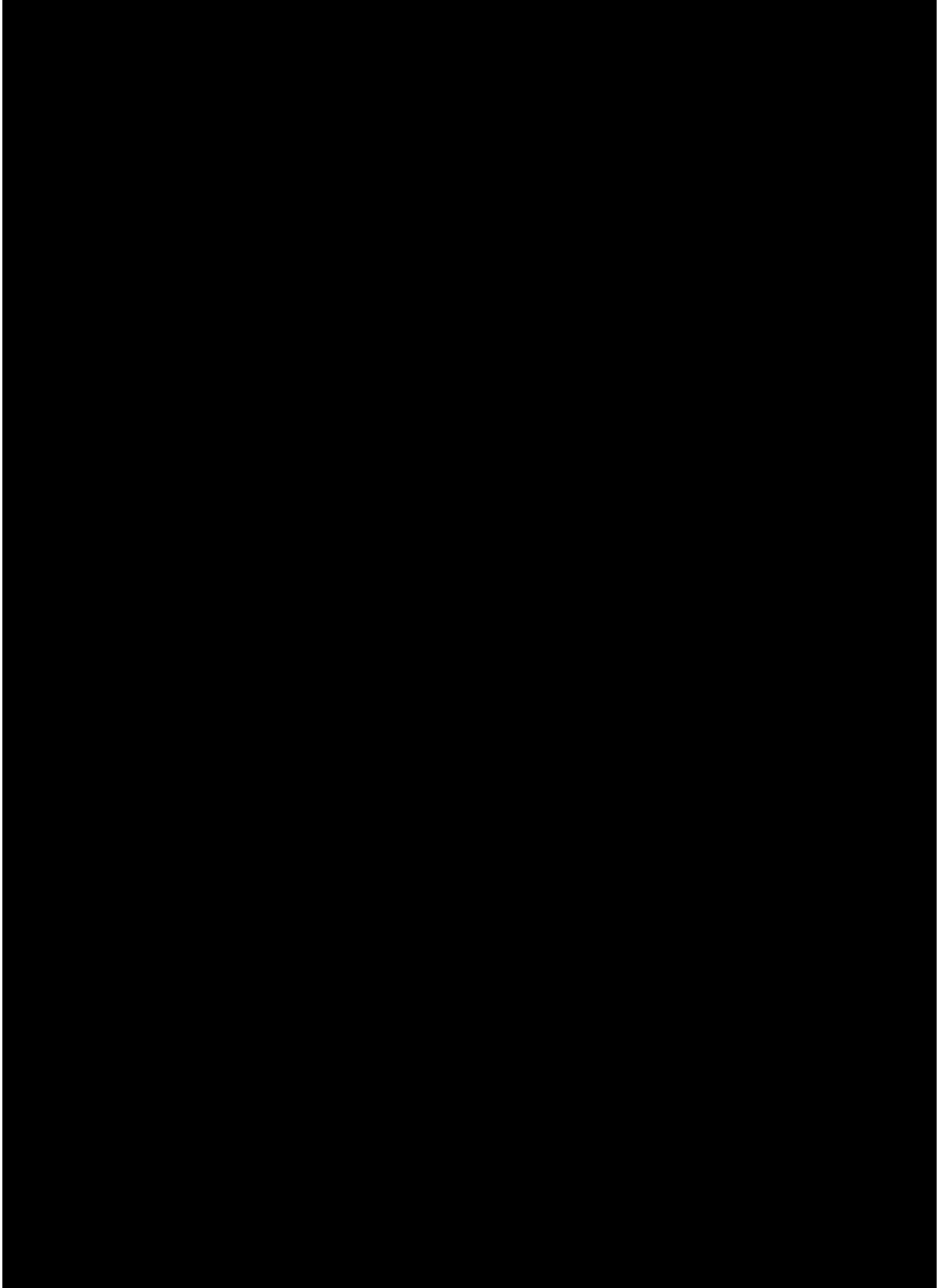


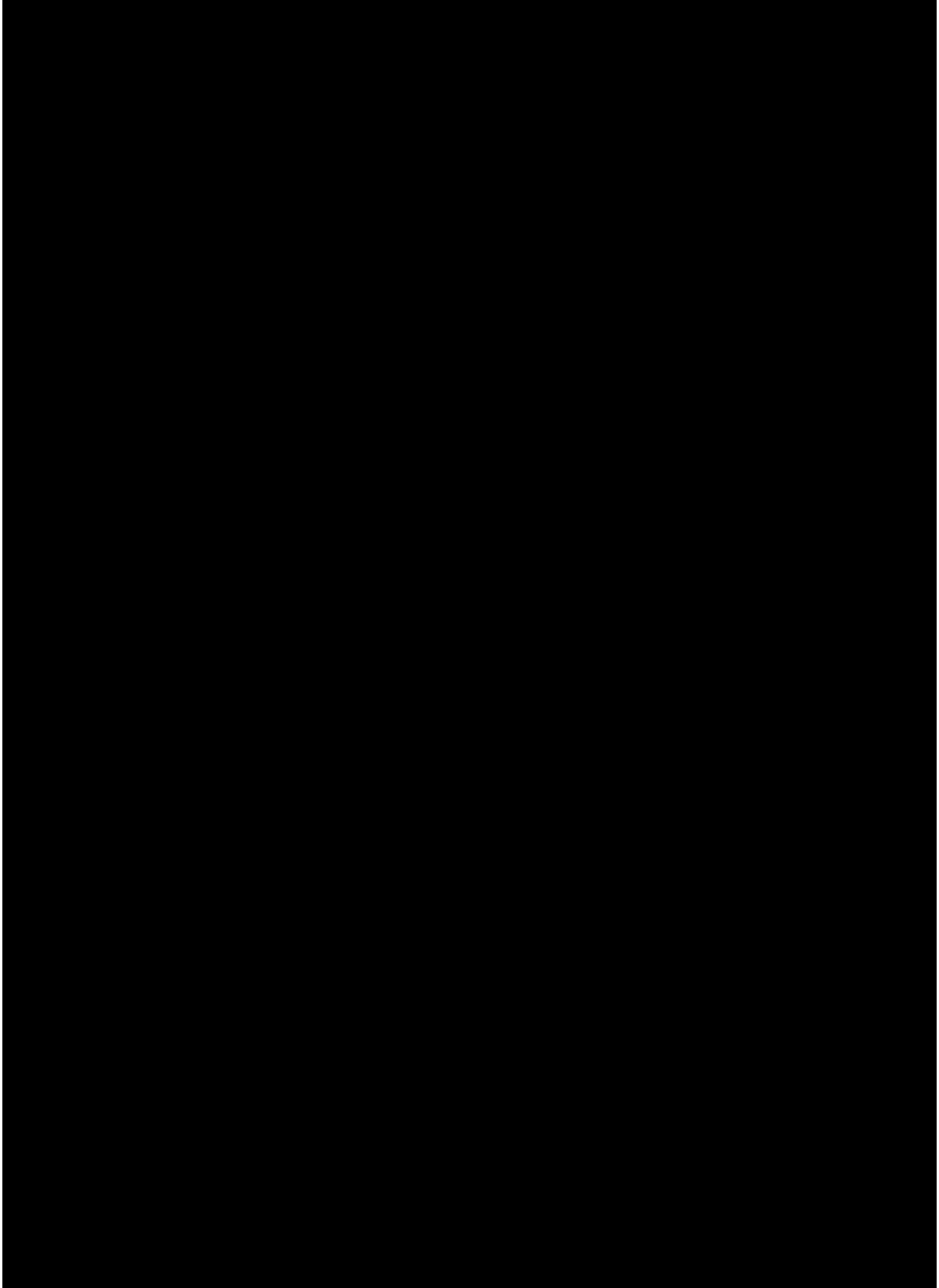
The background of the cover is a photograph of a mountain valley. The foreground shows dark, silhouetted mountain ridges. In the middle ground, a valley is visible, and the background features more distant, lighter mountain ranges. The sky is filled with large, white, billowing clouds, with a bright patch of light breaking through in the center. The overall color palette is dominated by blues, greys, and whites, with the dark foreground providing a strong contrast.

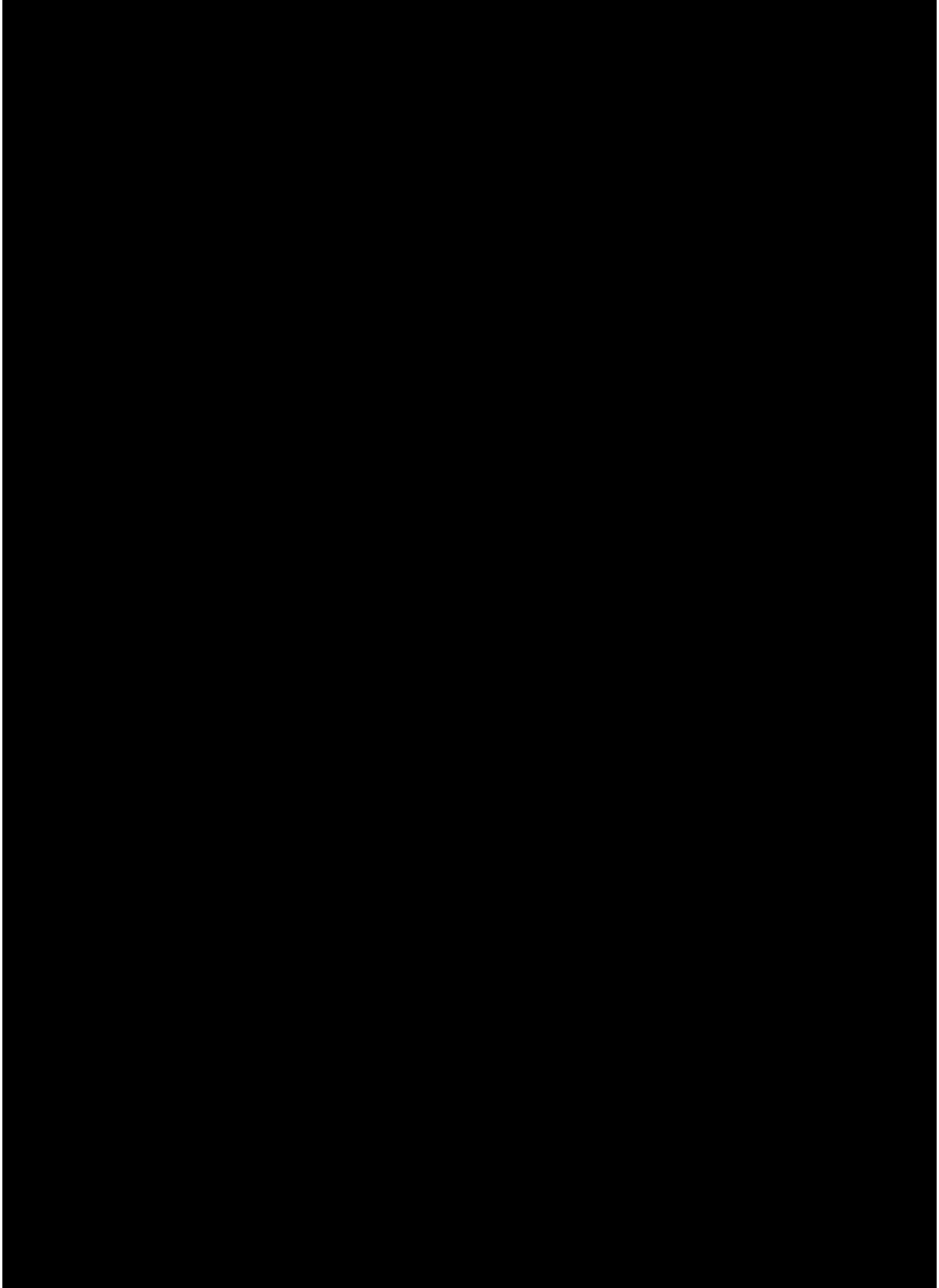
FUNDAMENTALS OF PHYSICAL GEOGRAPHY

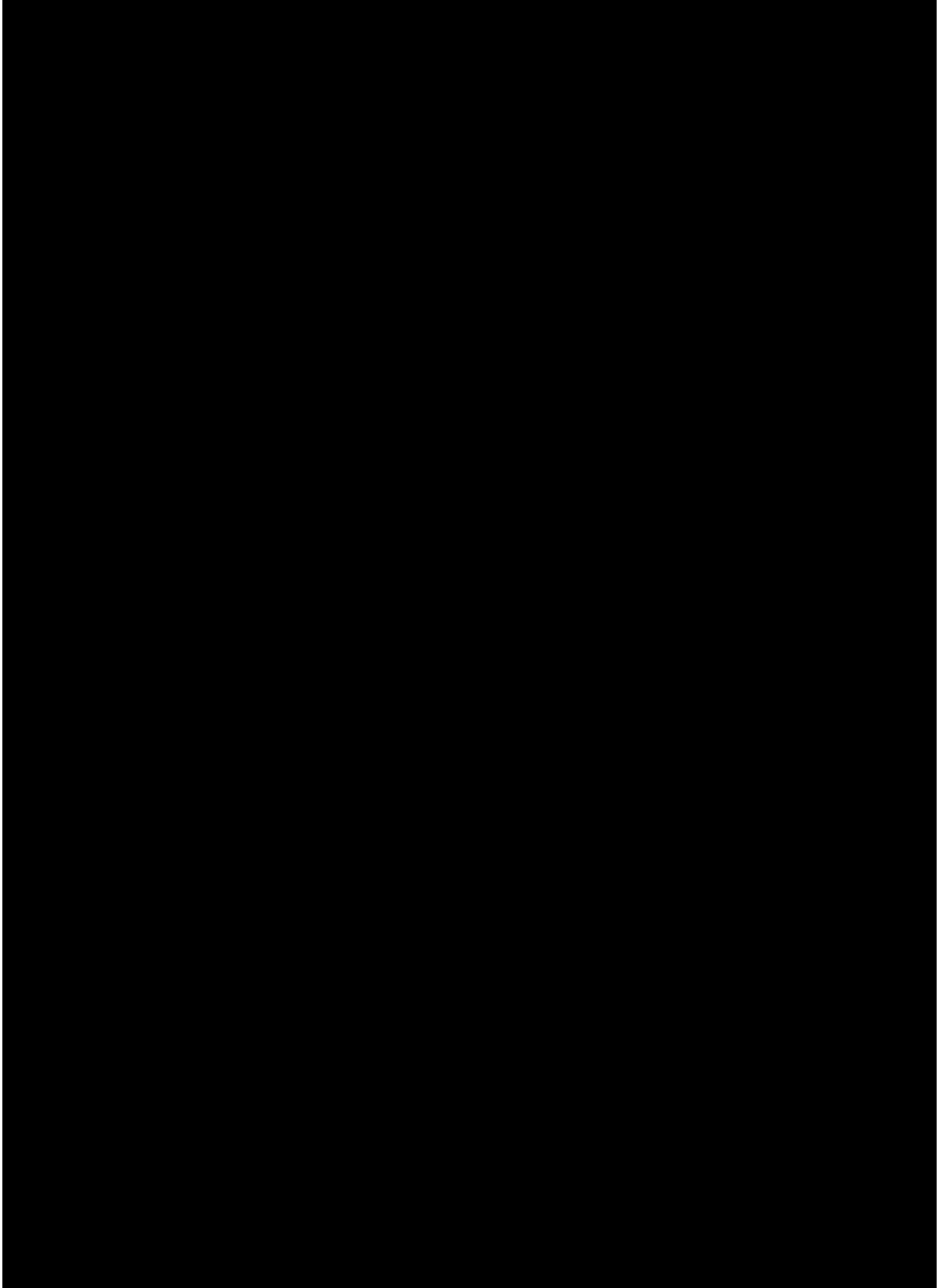
TEXTBOOK FOR CLASS XI

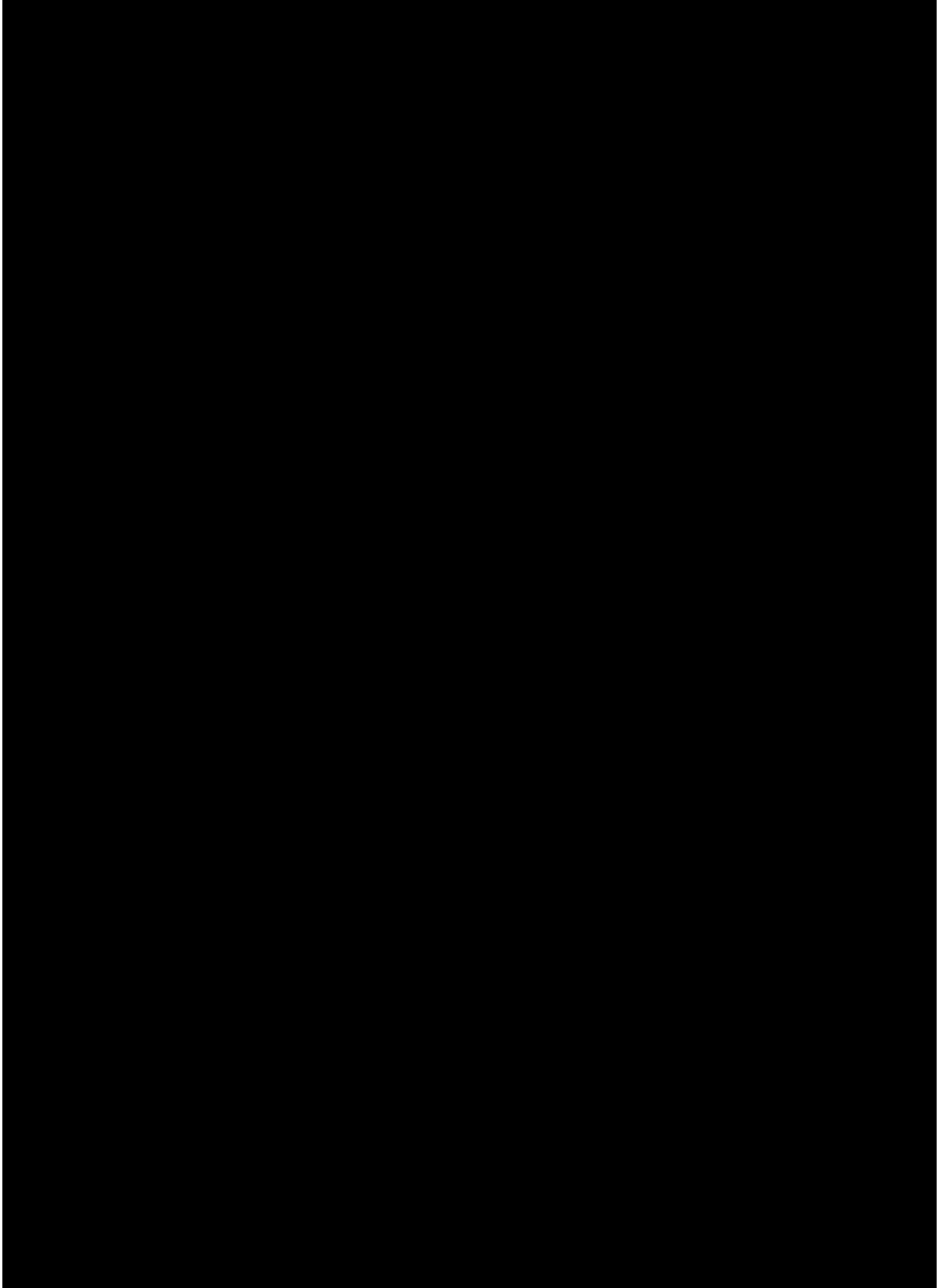


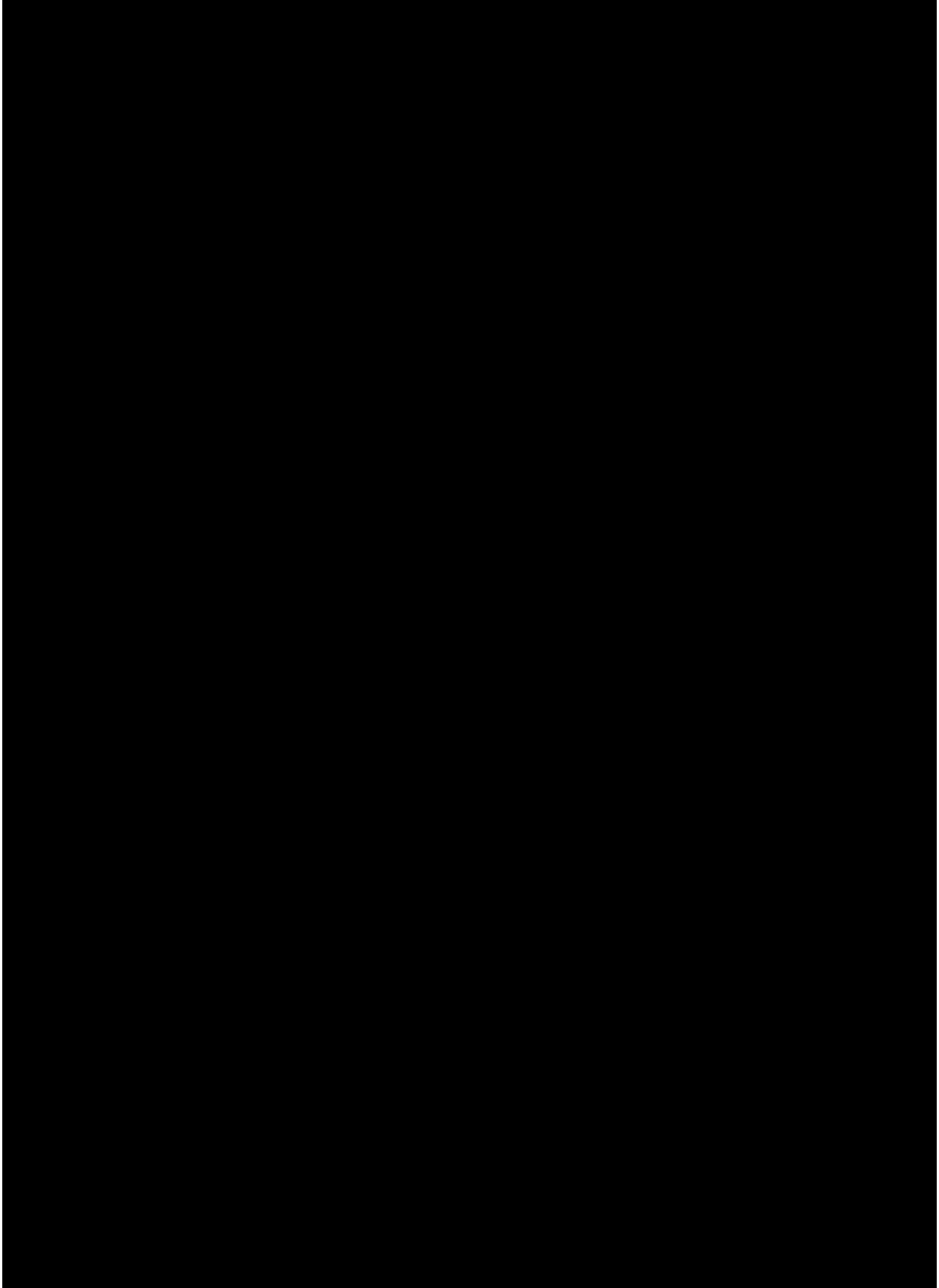


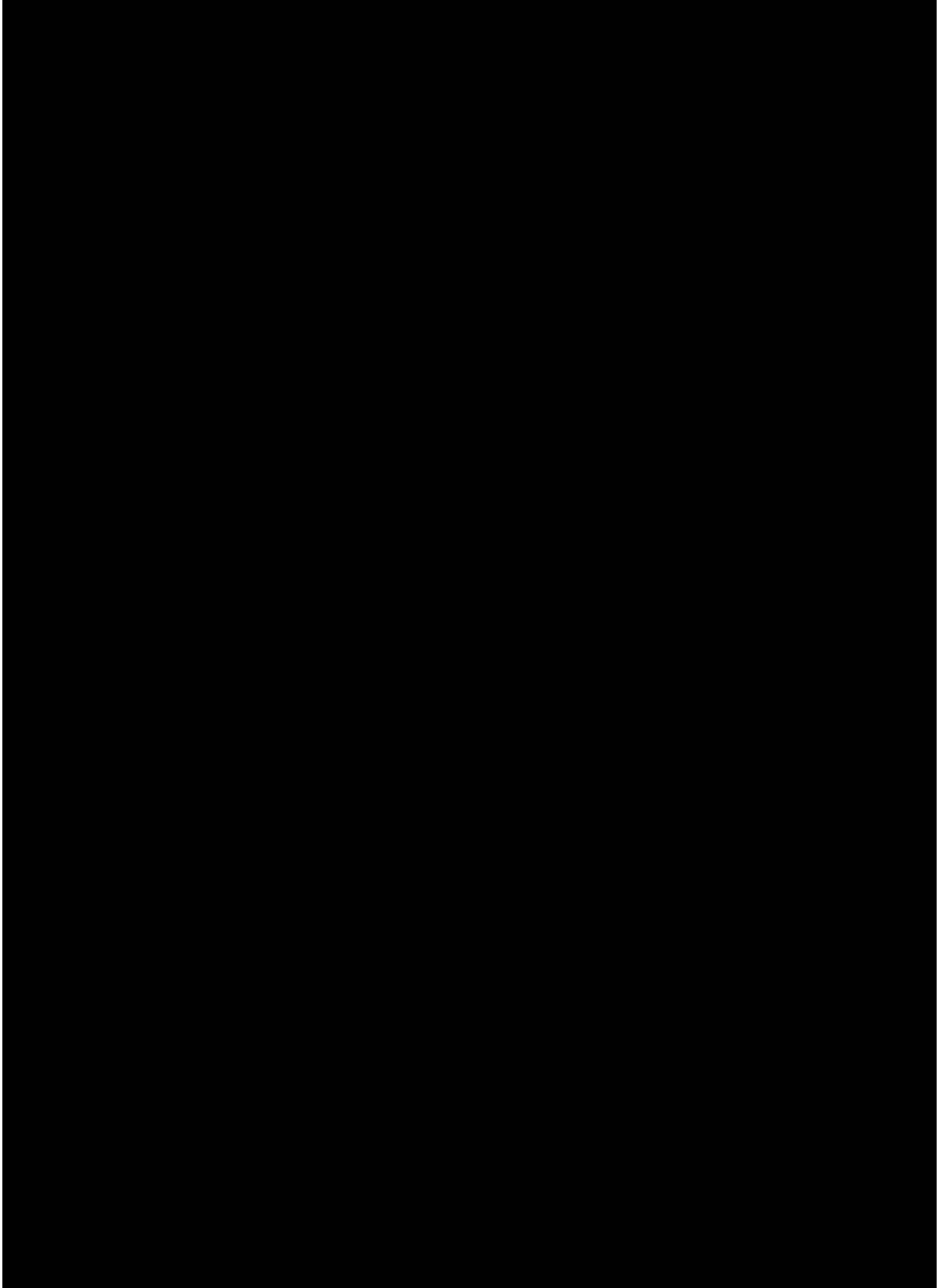


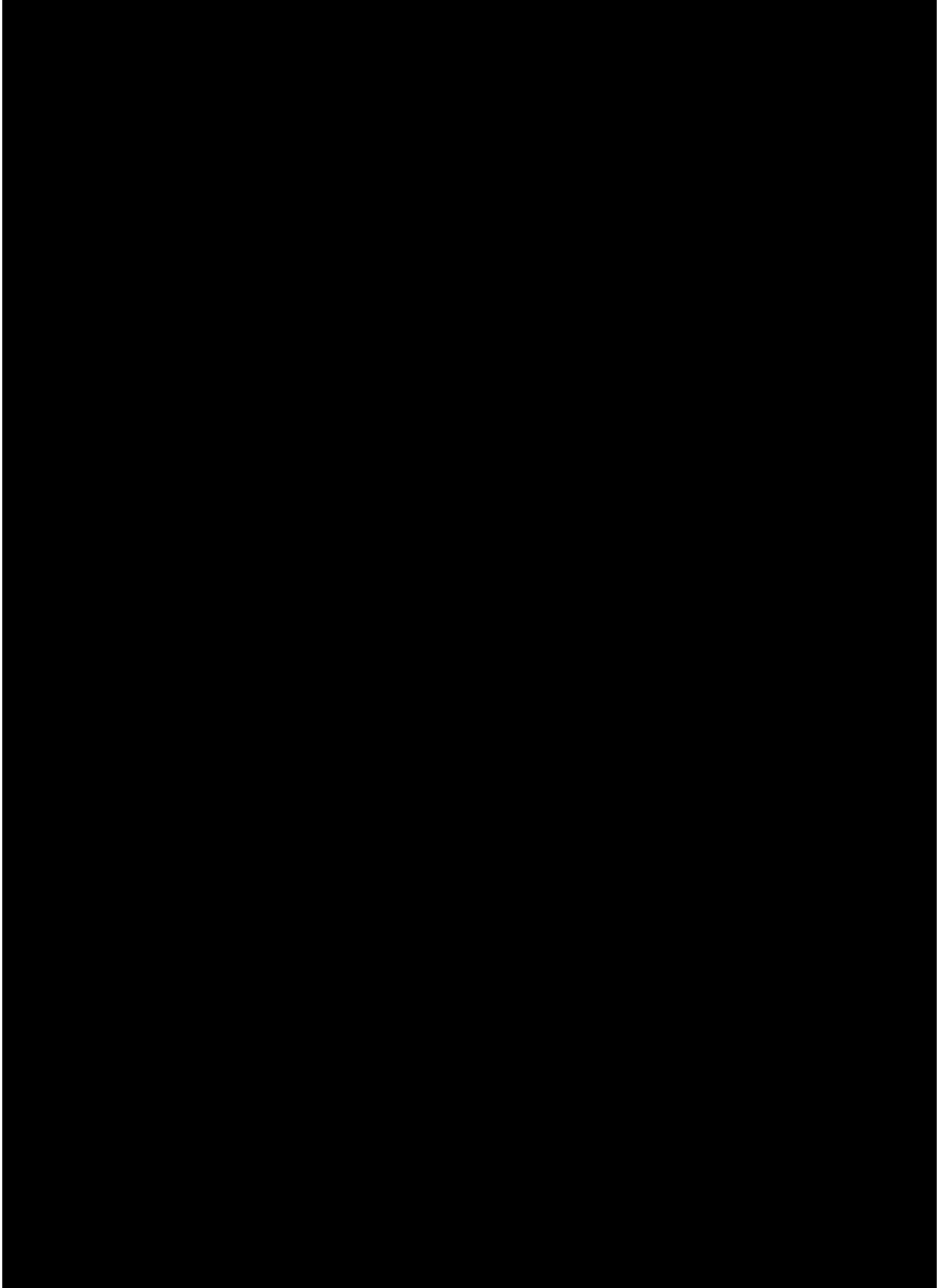




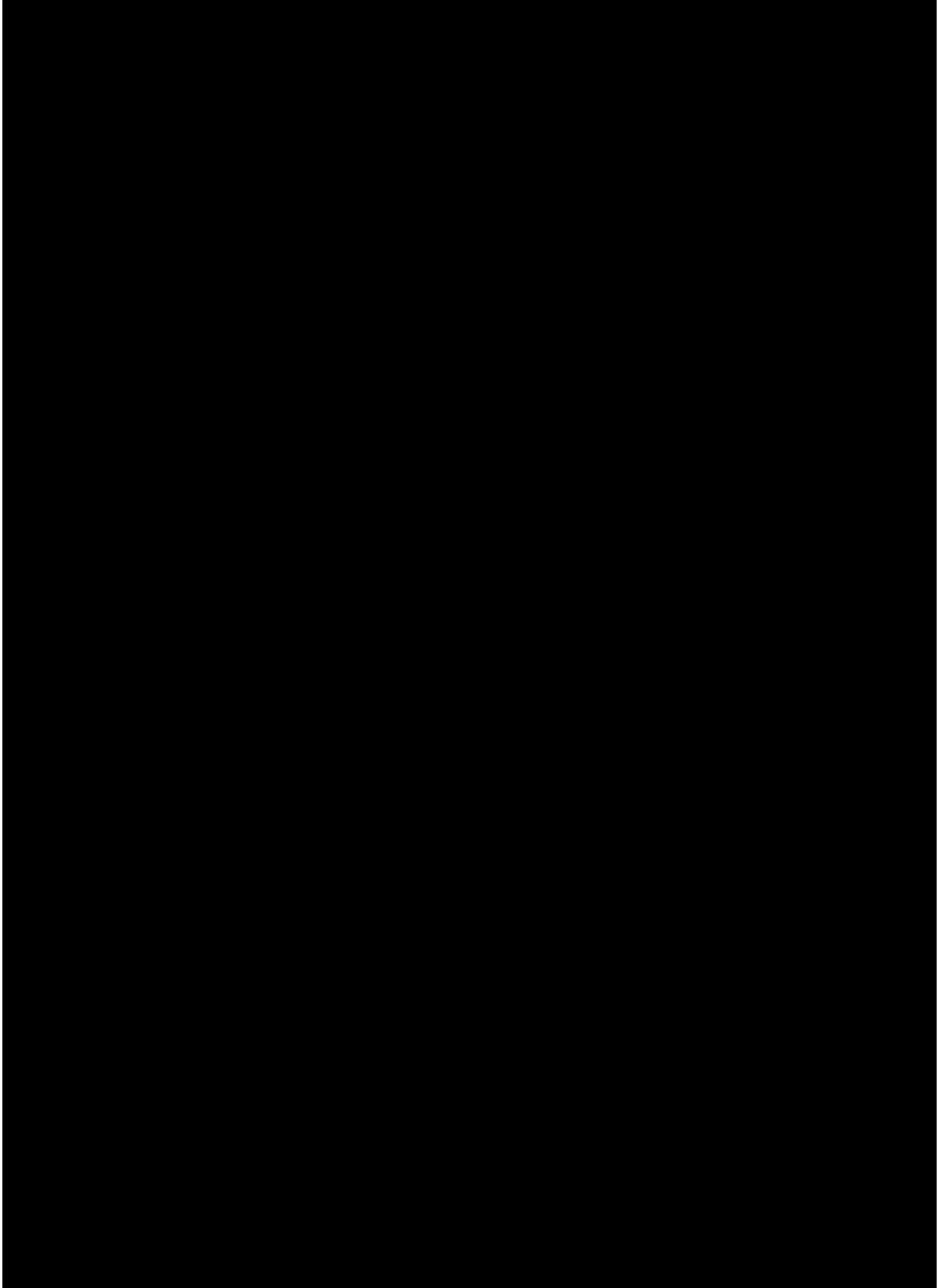












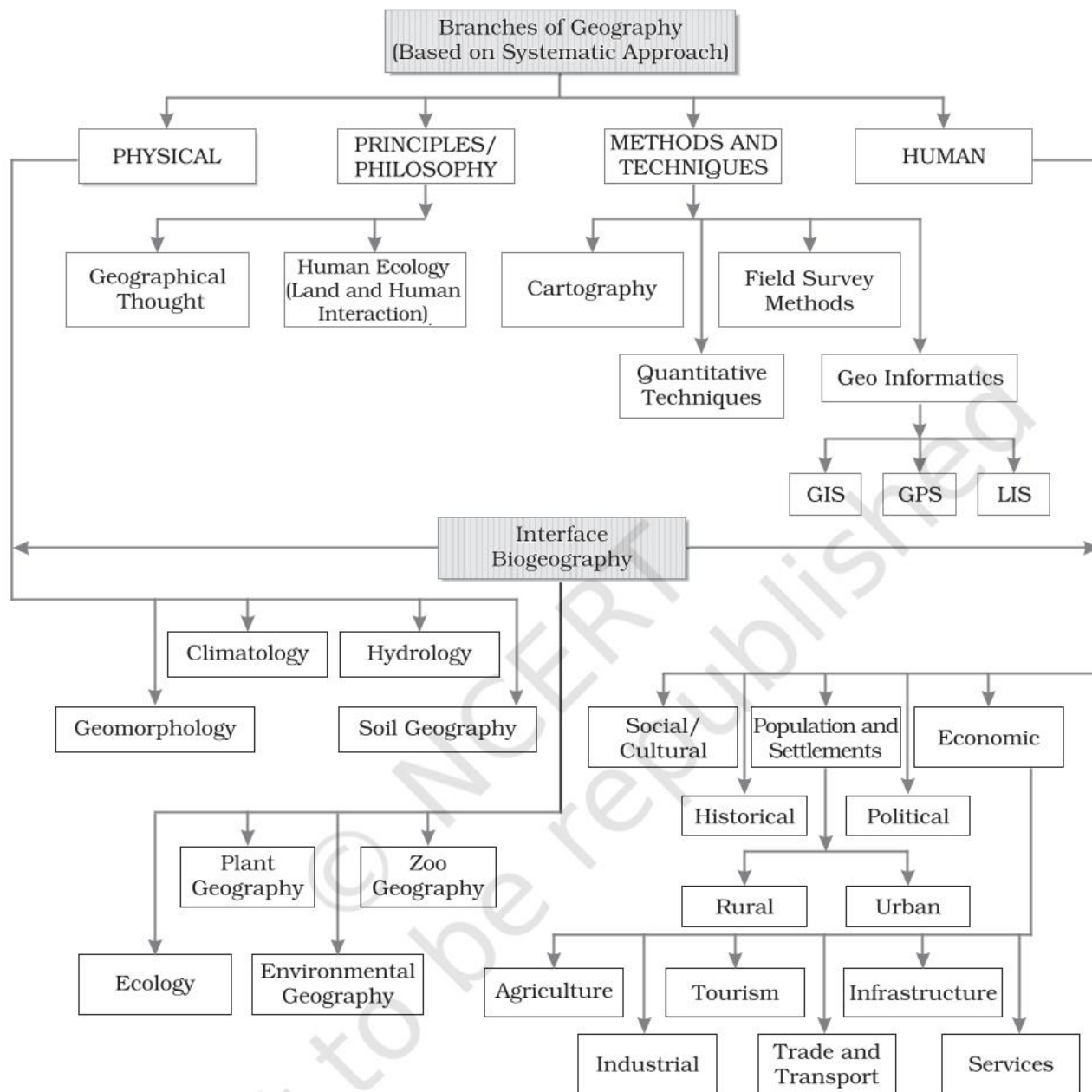


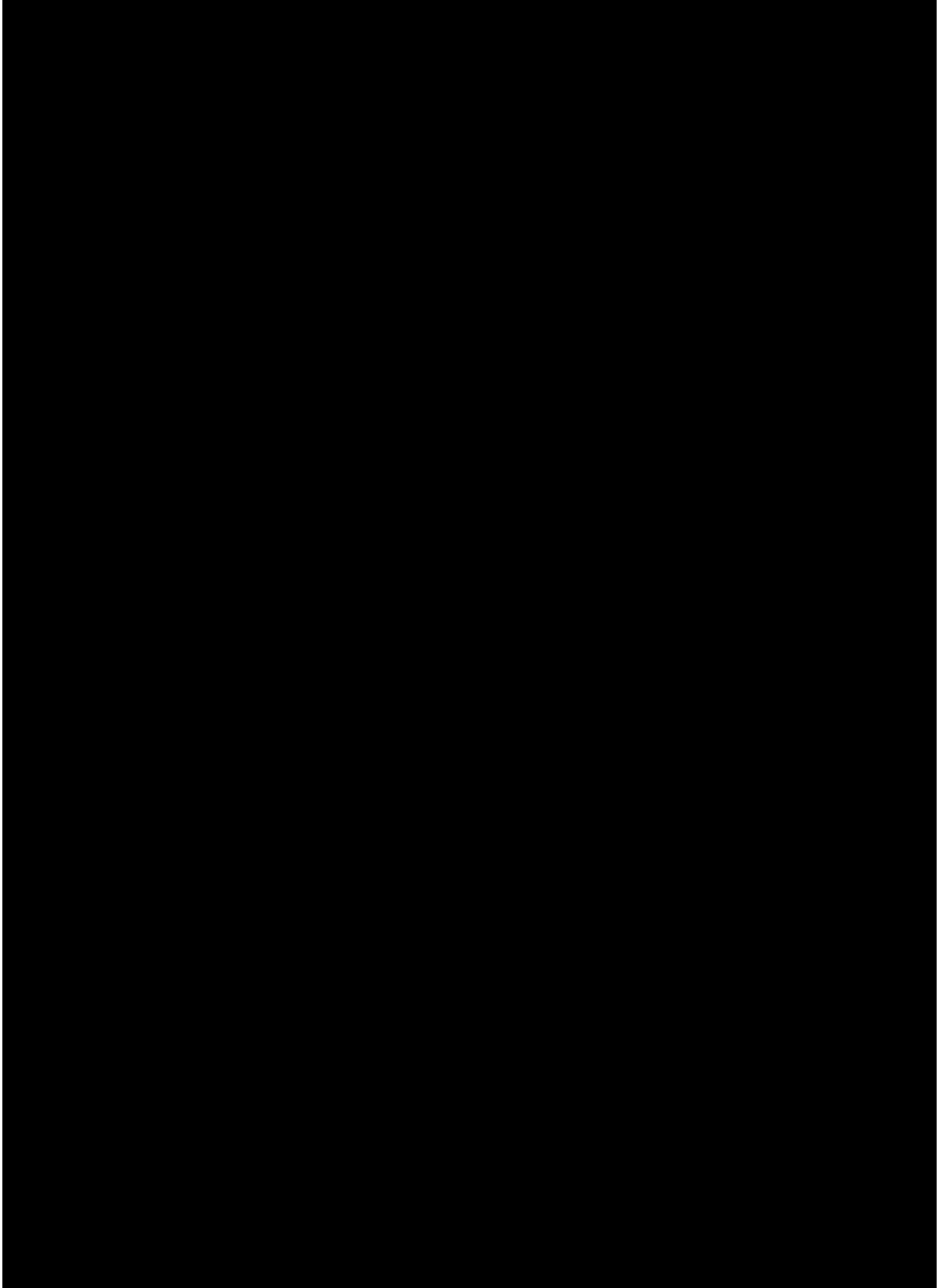
Figure 1.2 : Branches of geography based on systematic approach

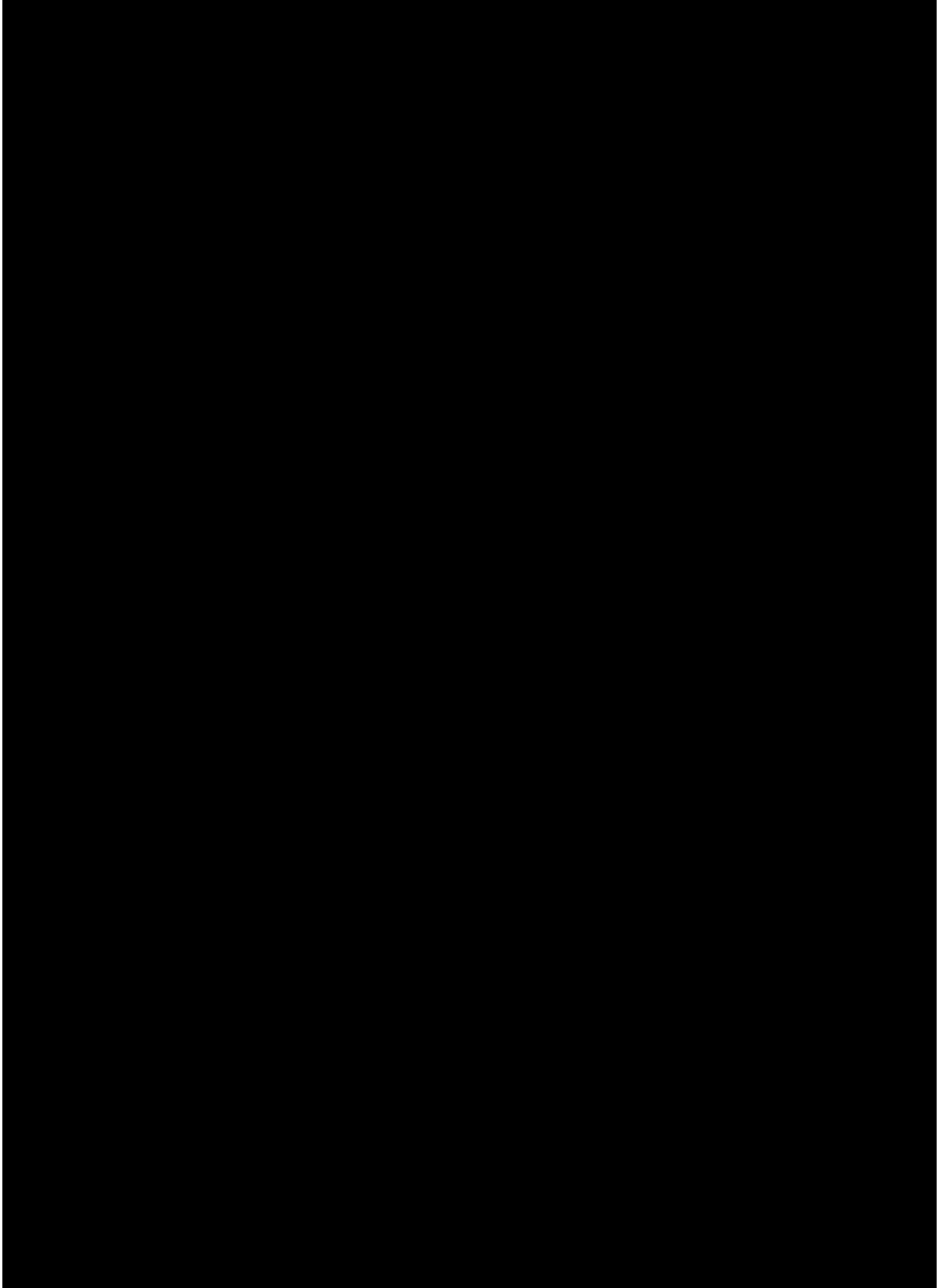
- (v) *Political Geography* looks at the space from the angle of political events and studies boundaries, space relations between neighbouring political units, delimitation of constituencies, election scenario and develops theoretical *framework* to understand the political behaviour of the population.

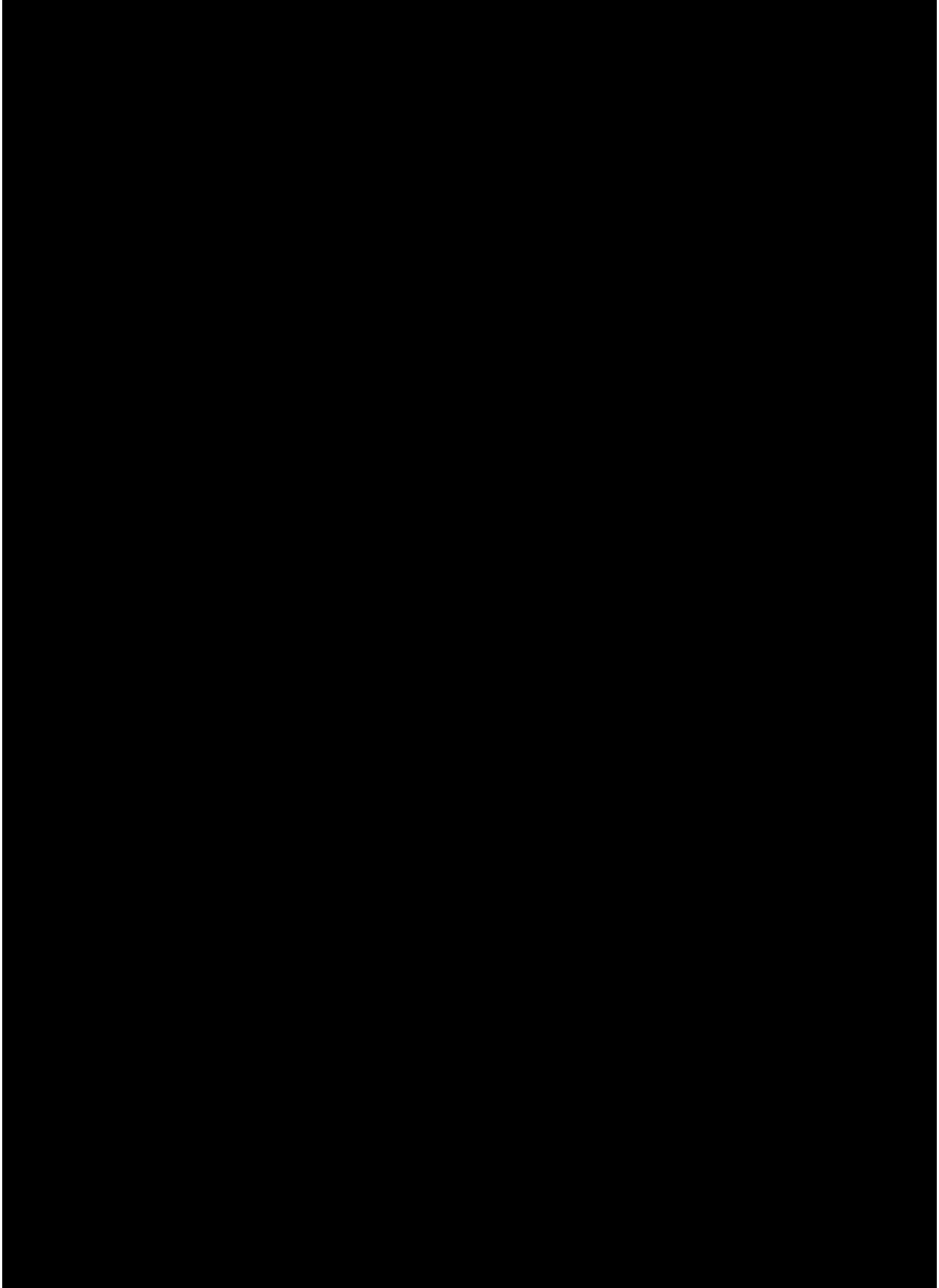
3. Biogeography

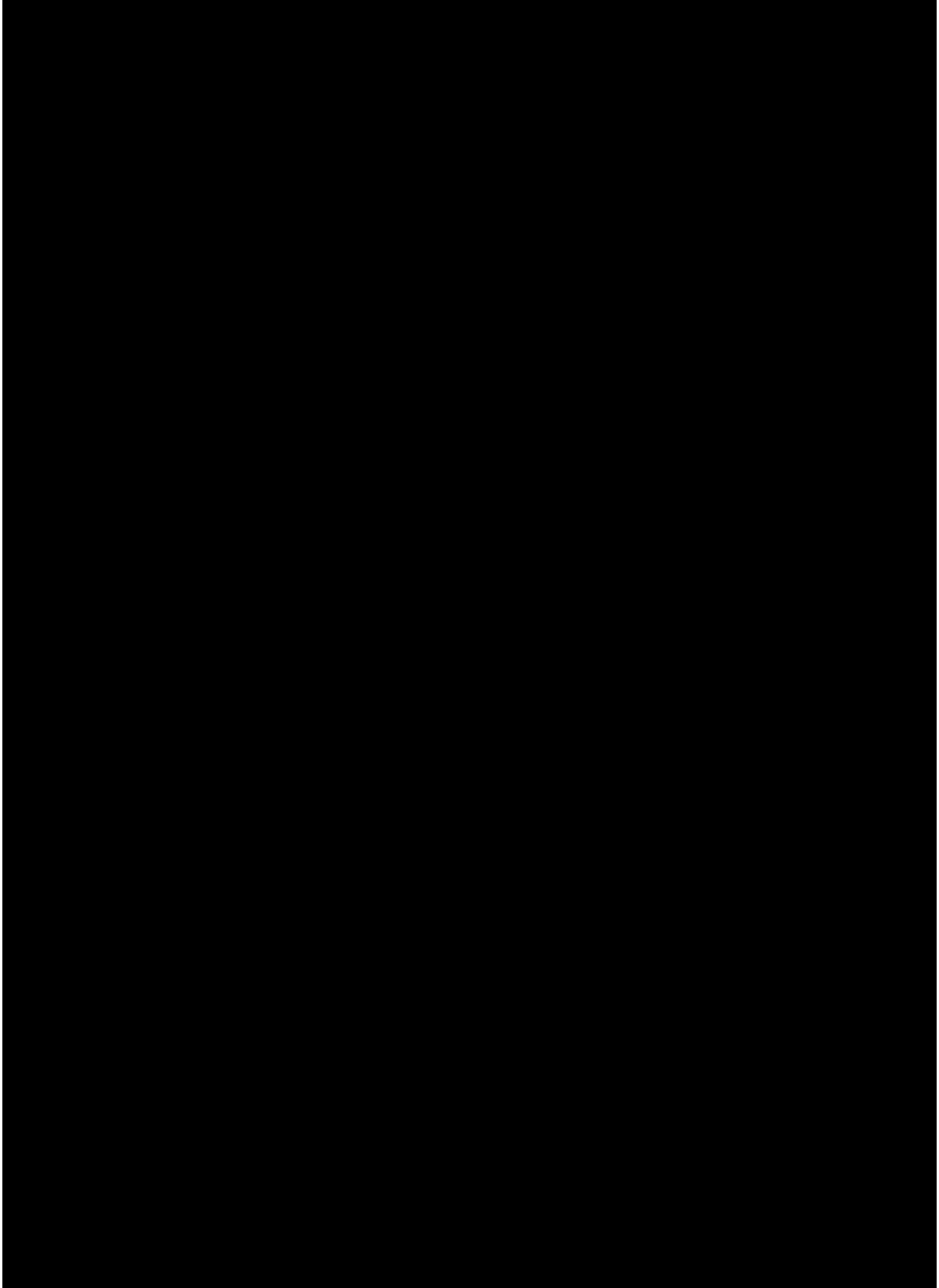
The interface between physical geography and human geography has lead to the development of Biogeography which includes:

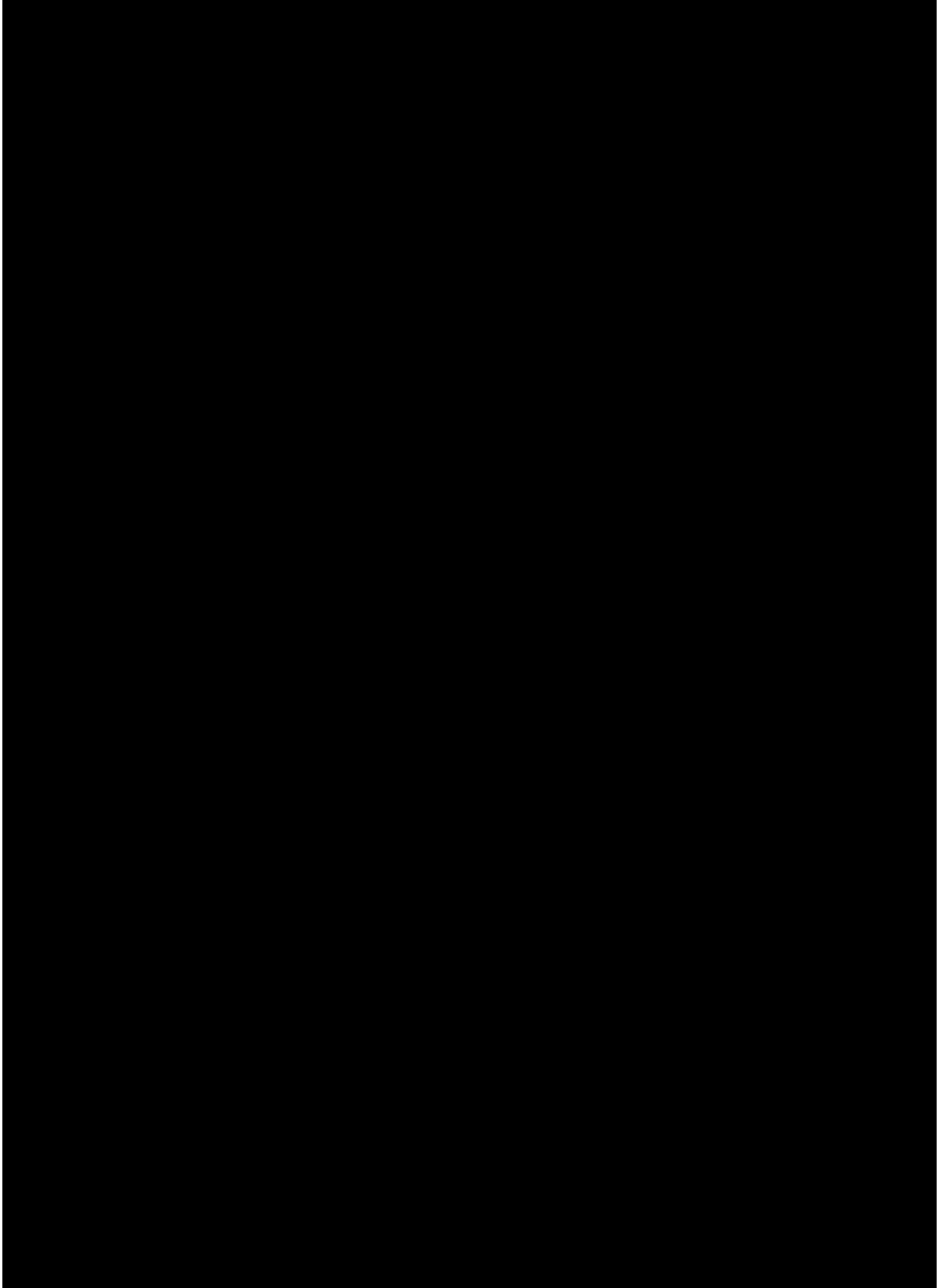
- (i) *Plant Geography* which studies the spatial pattern of natural vegetation in their habitats.

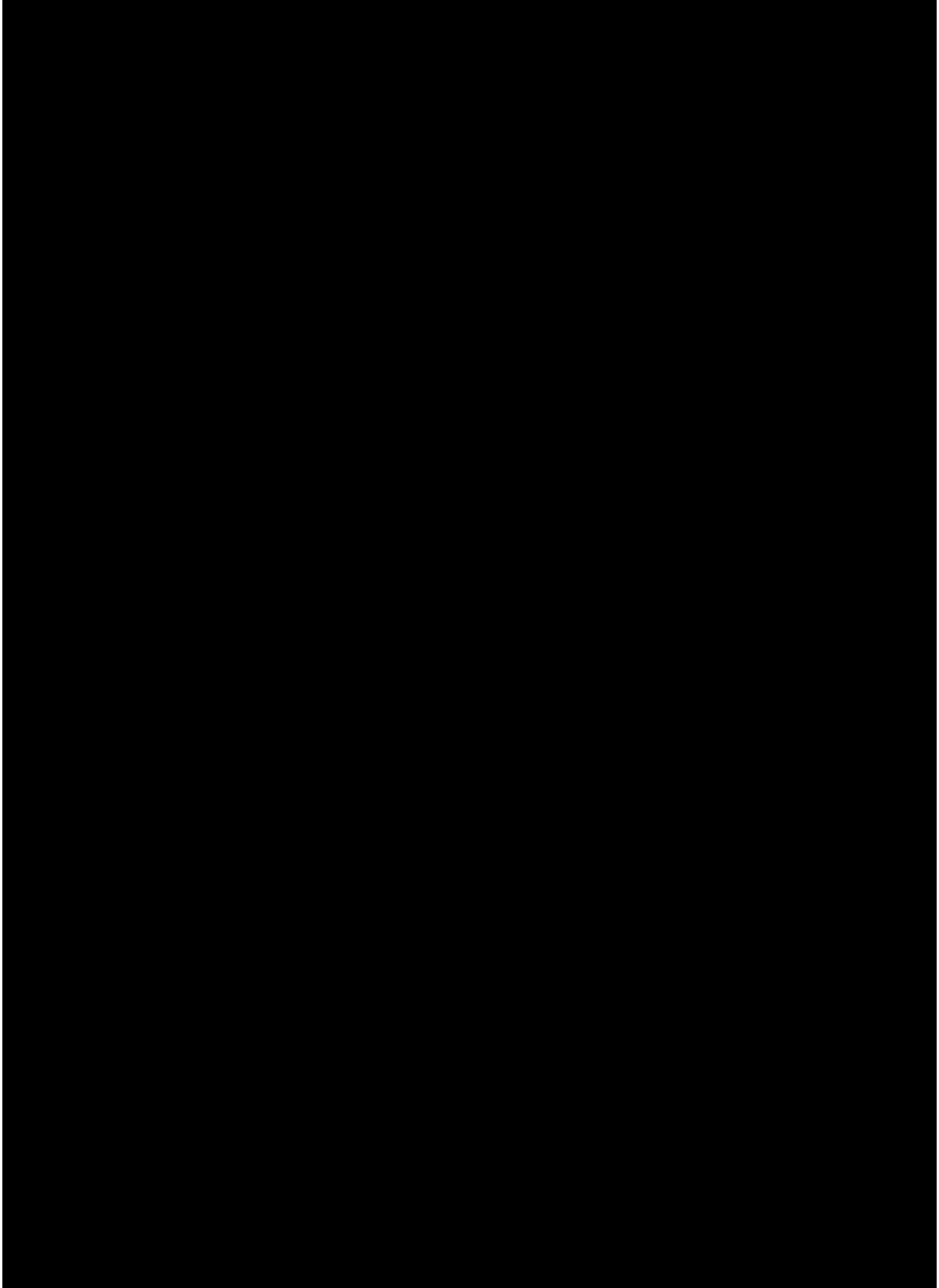


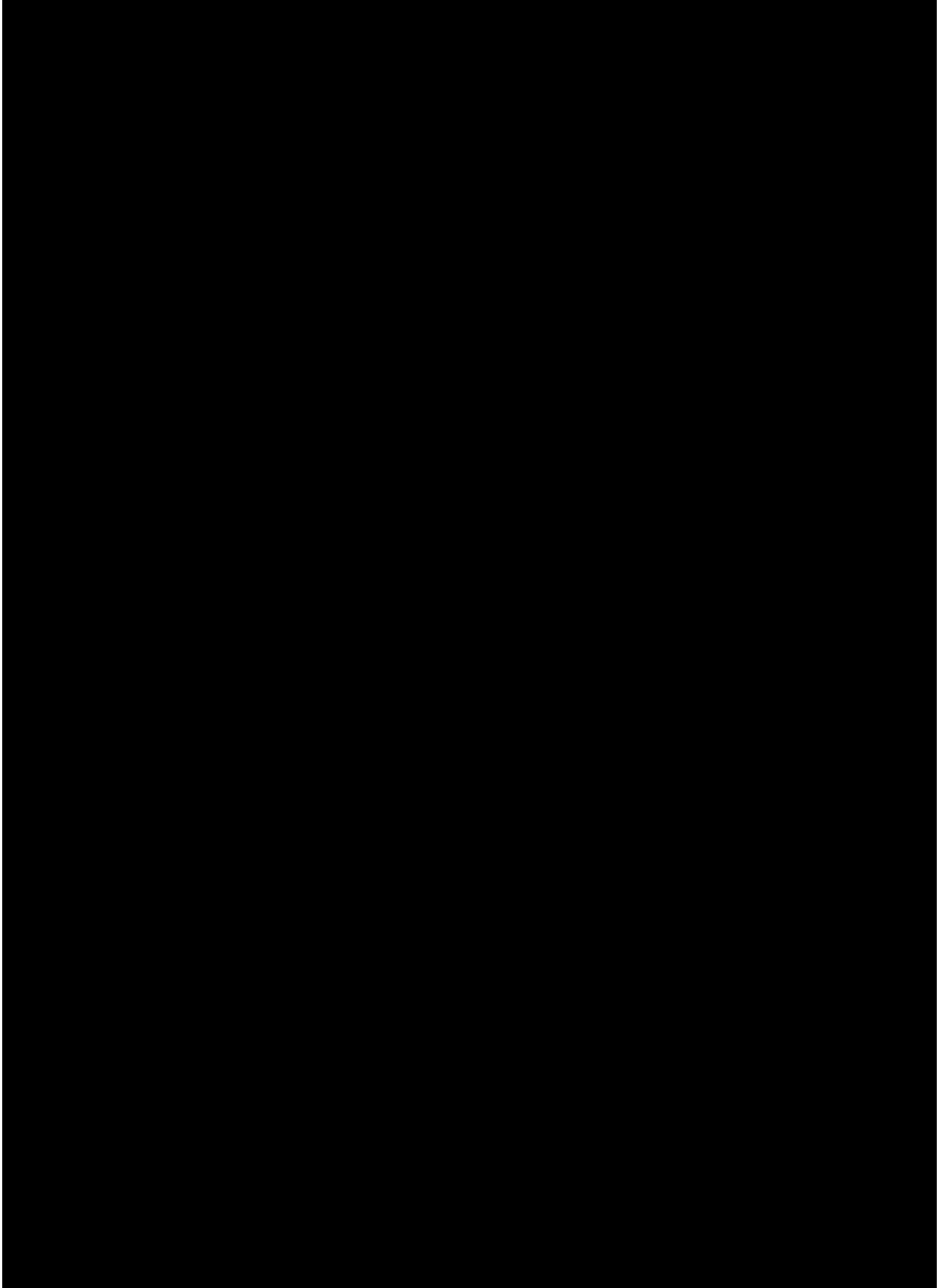


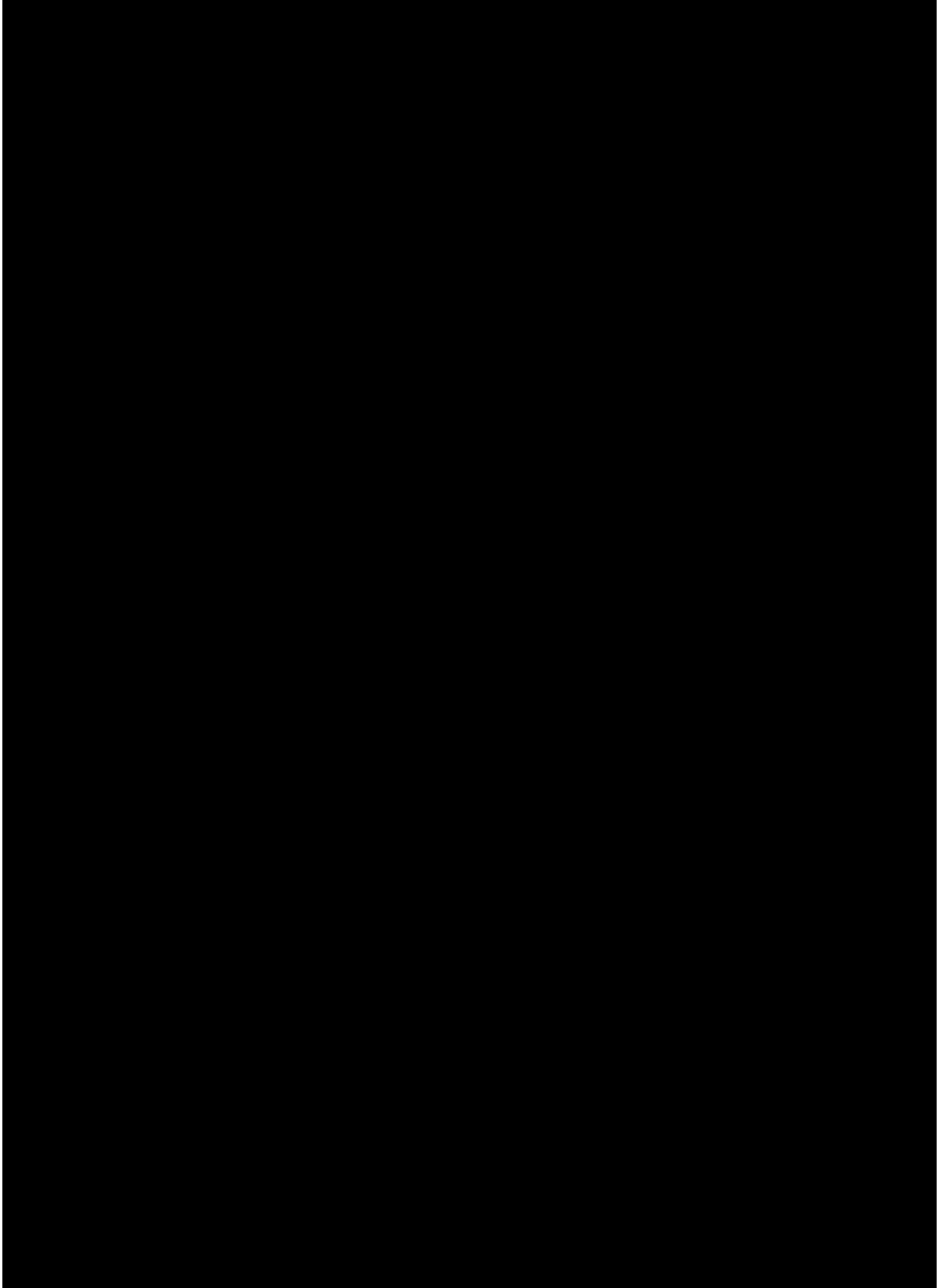


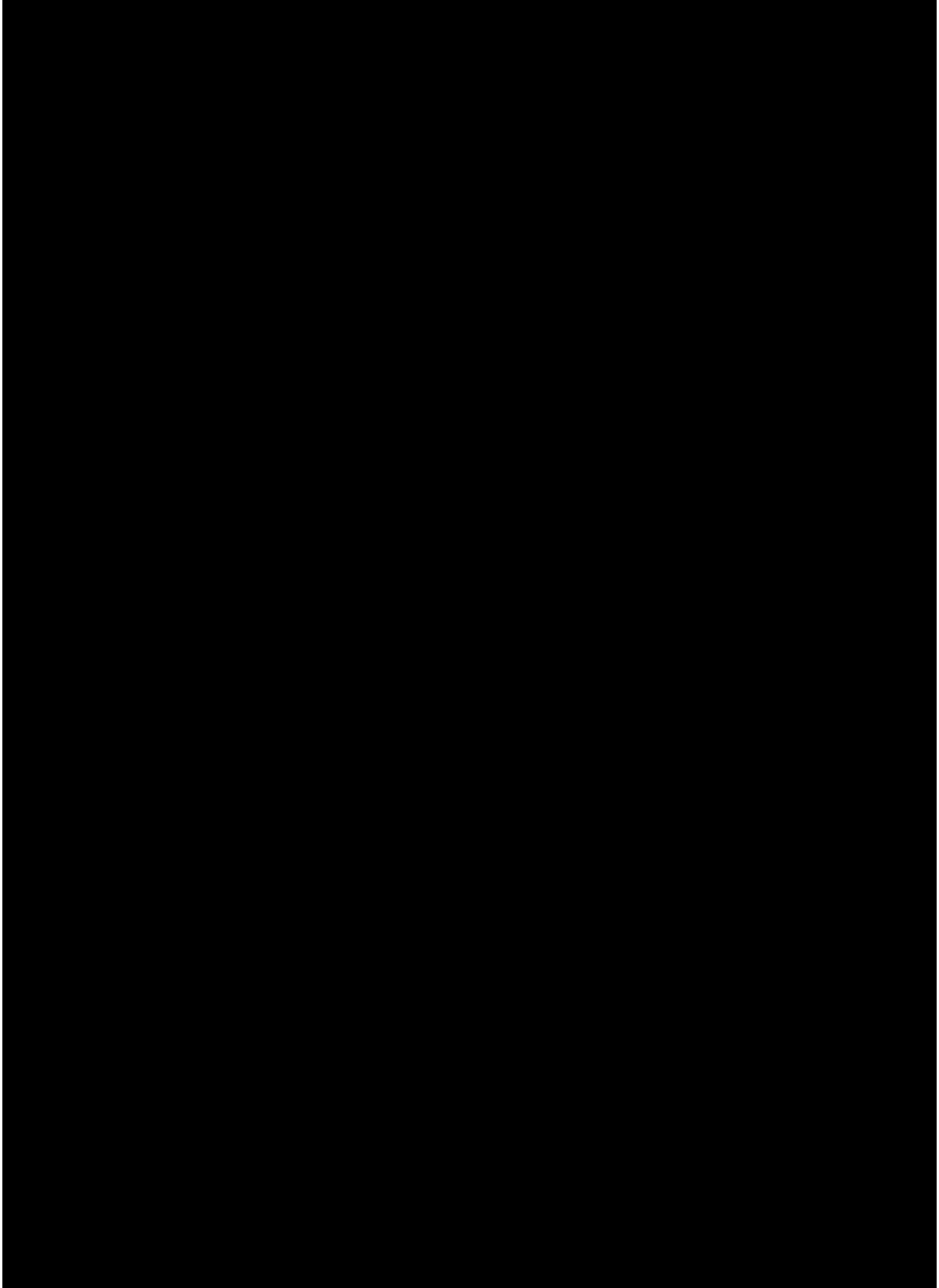


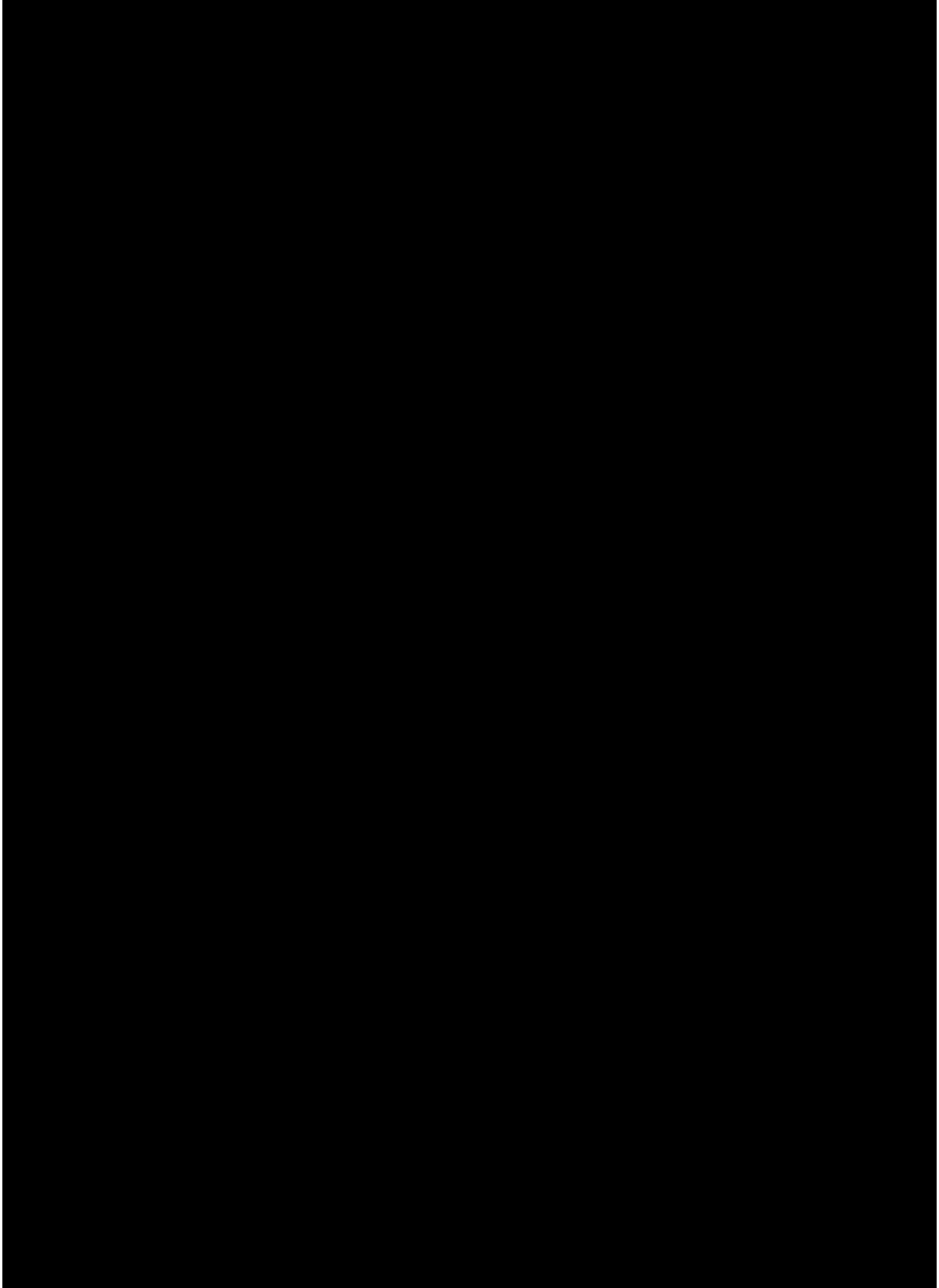


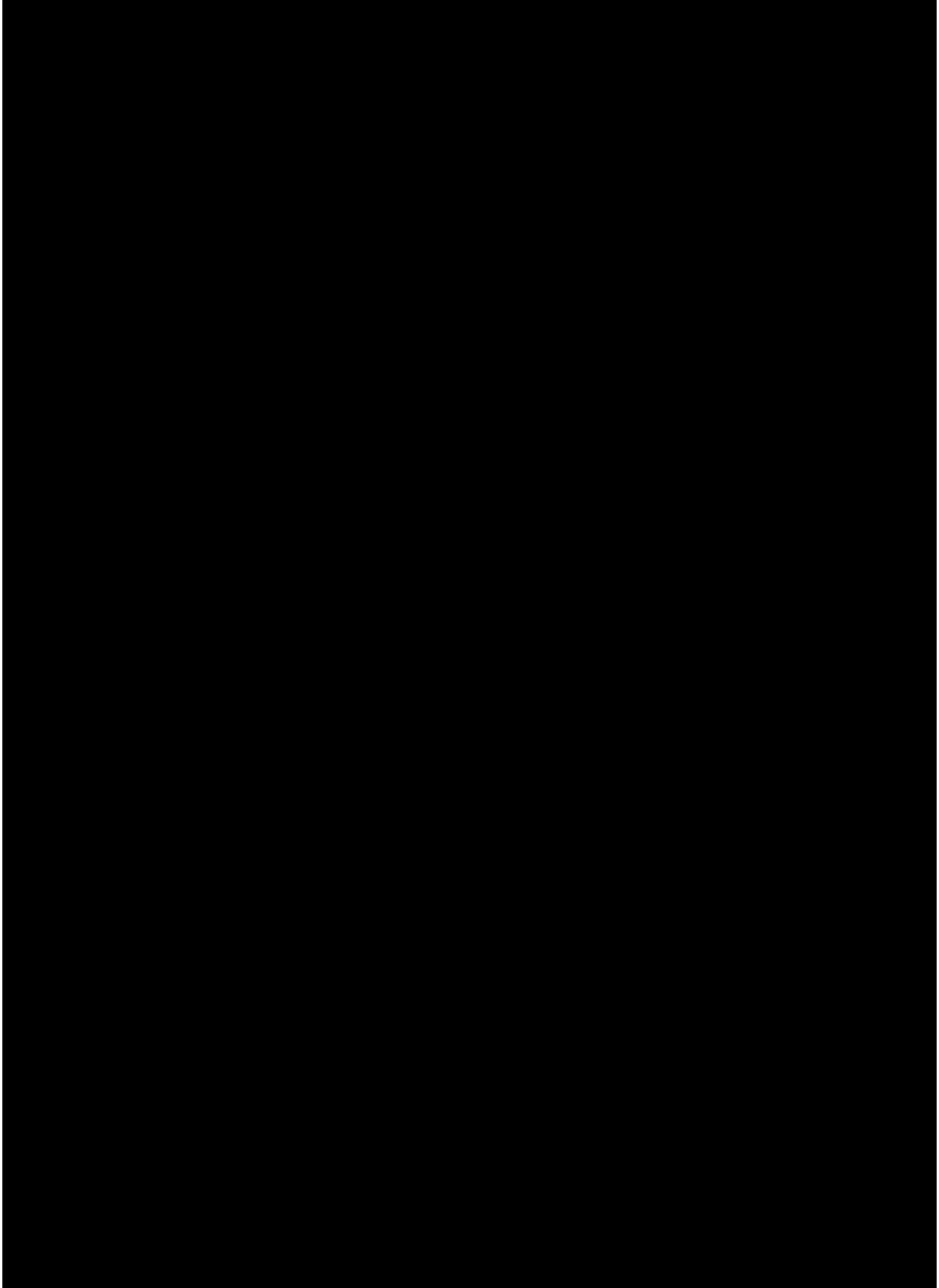


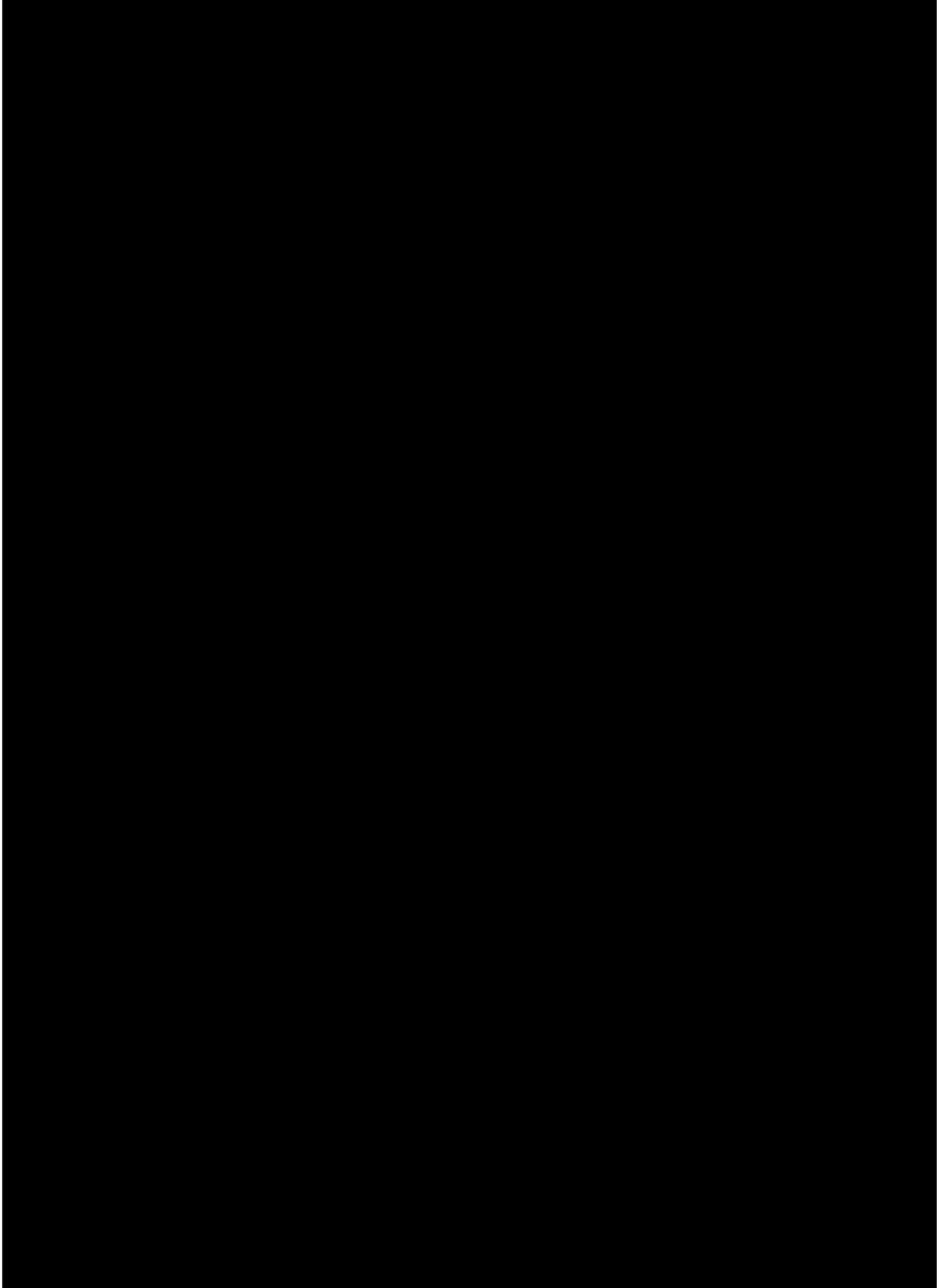


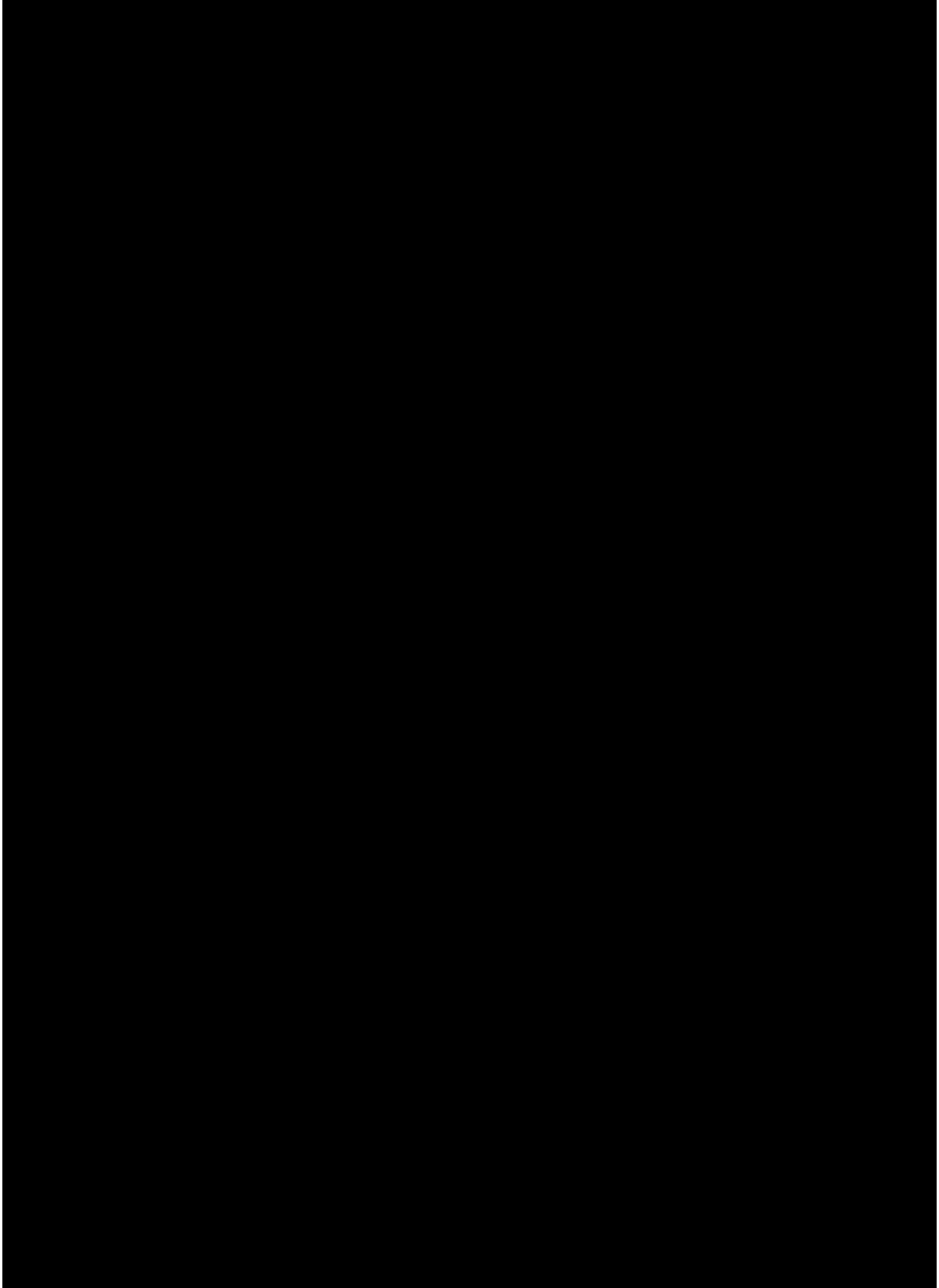


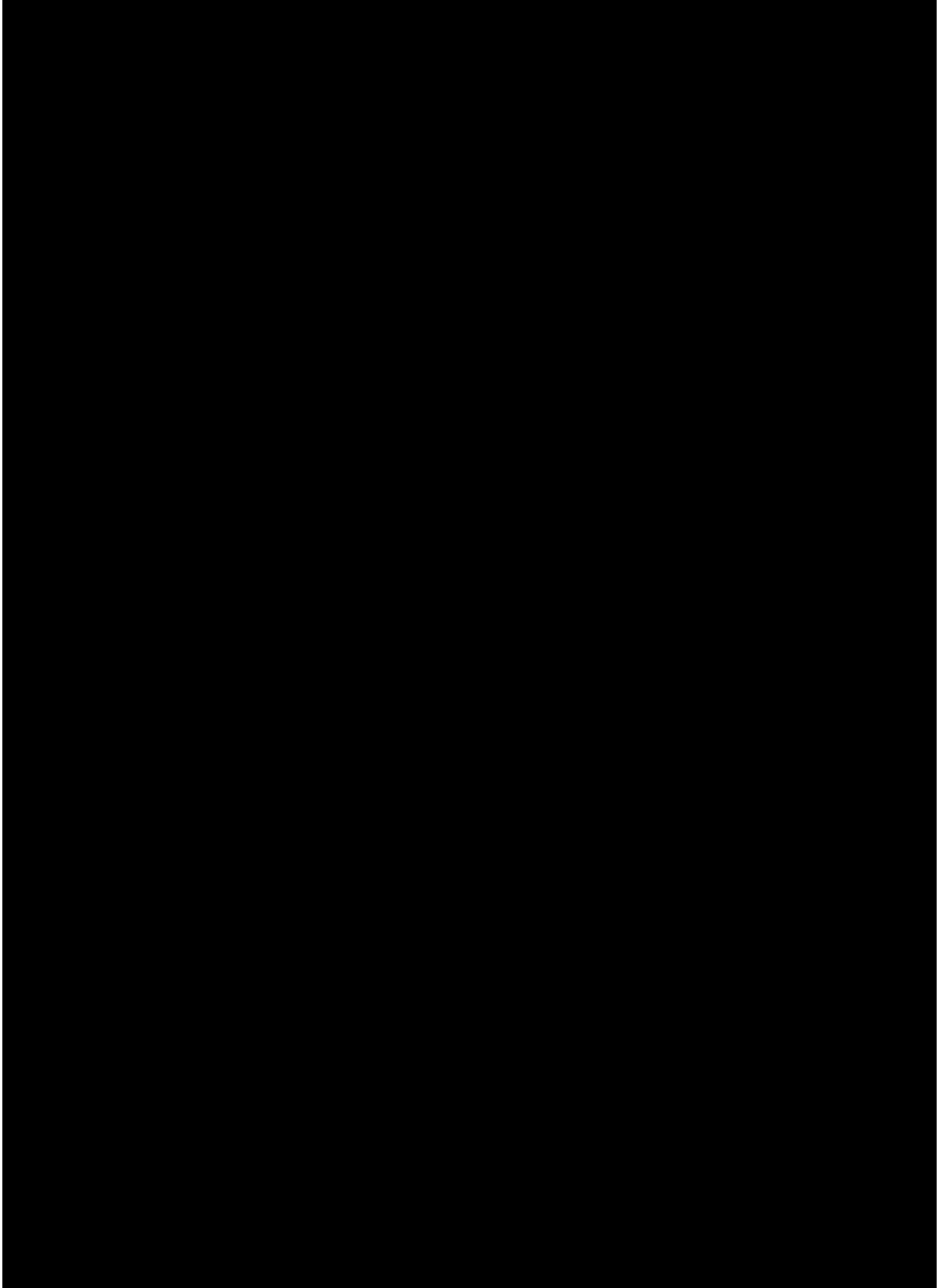


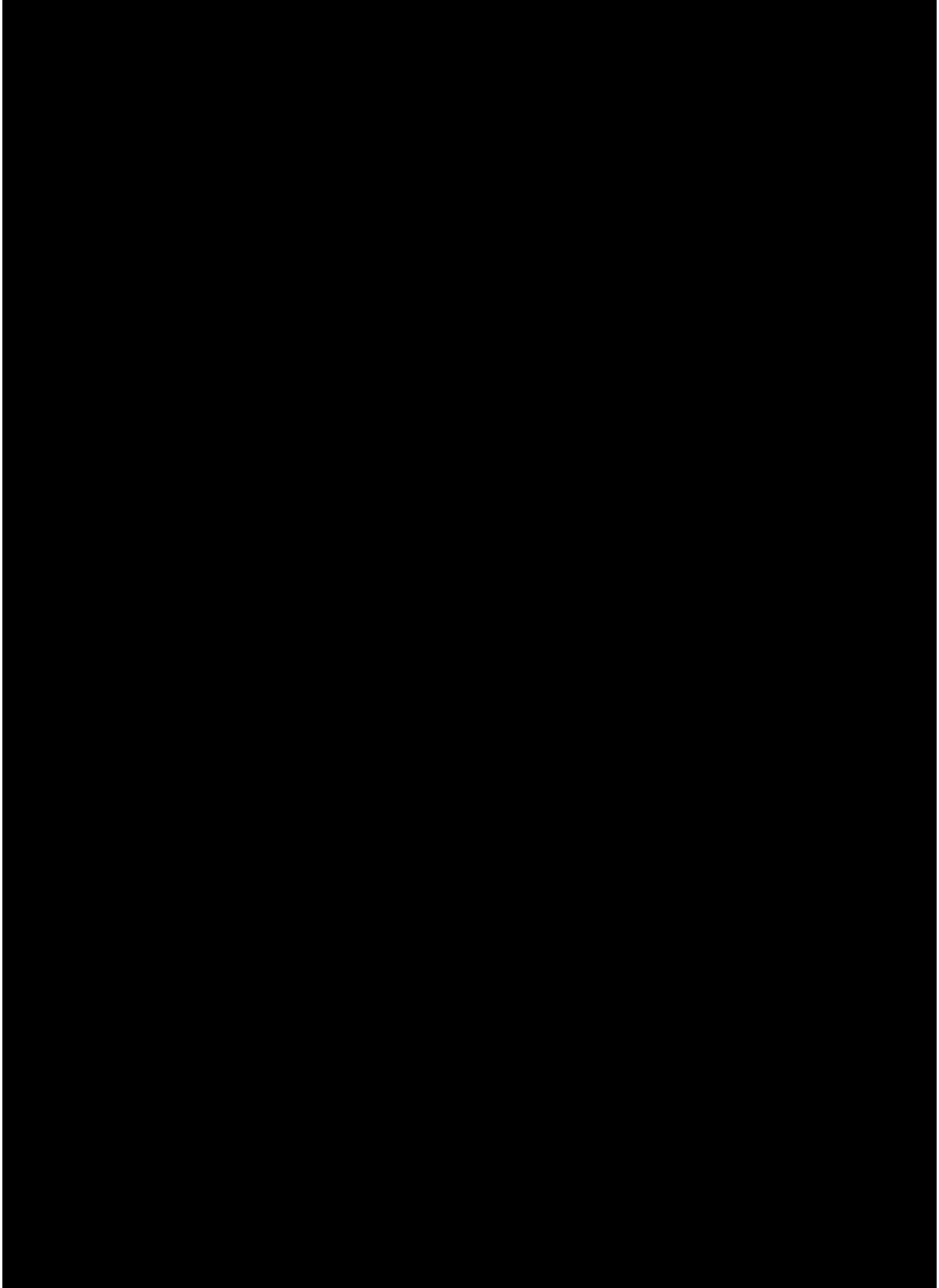


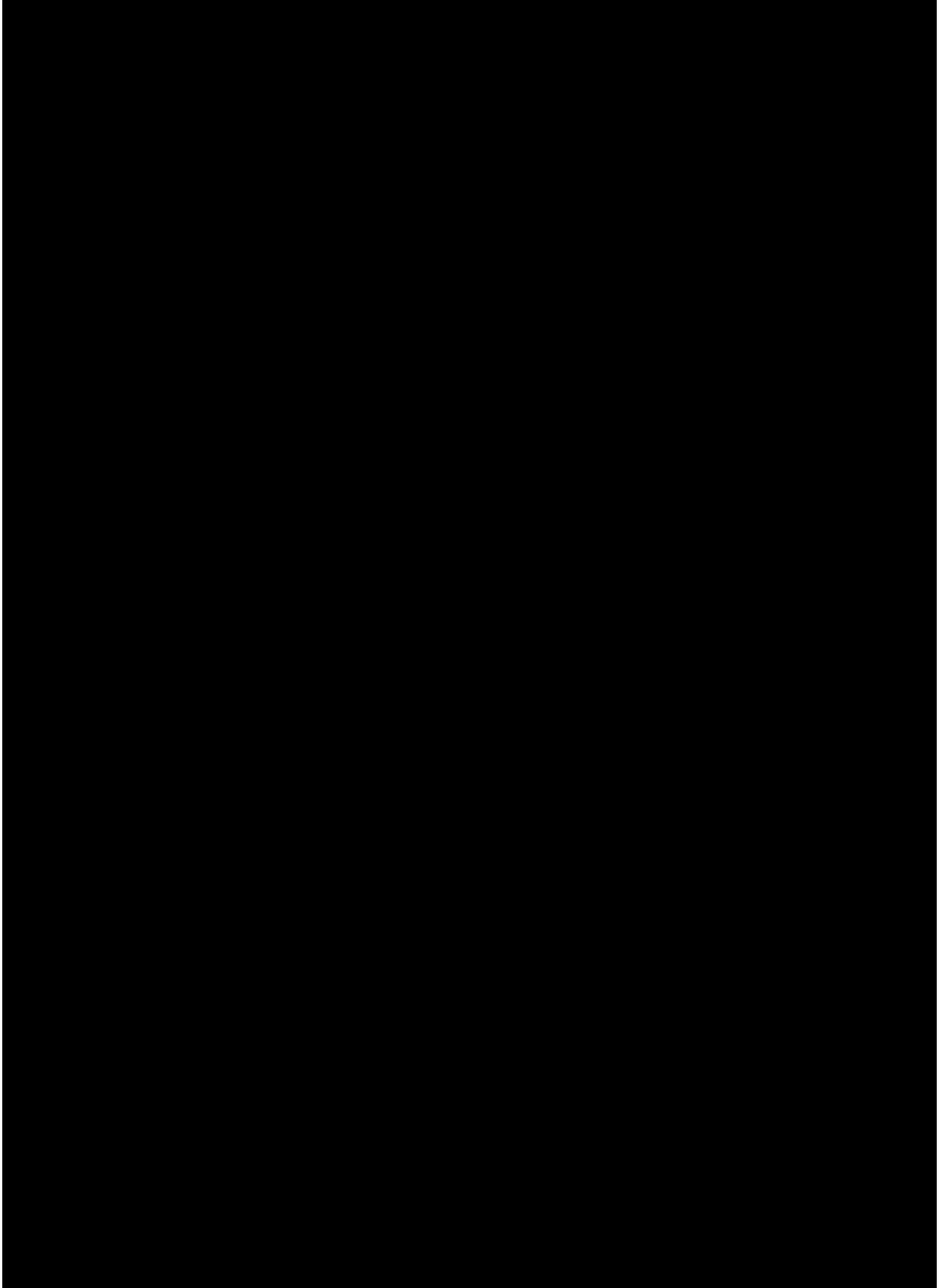


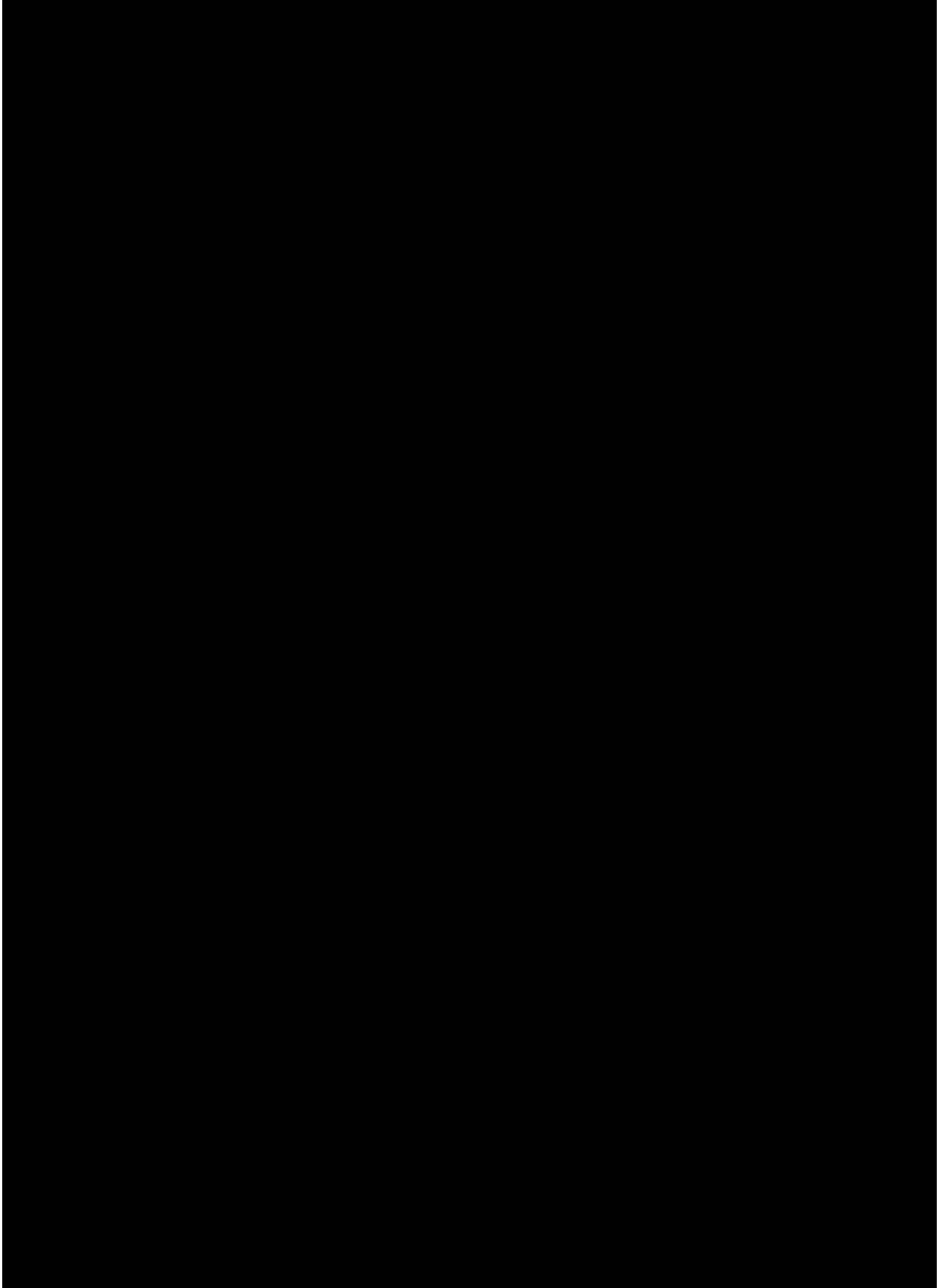


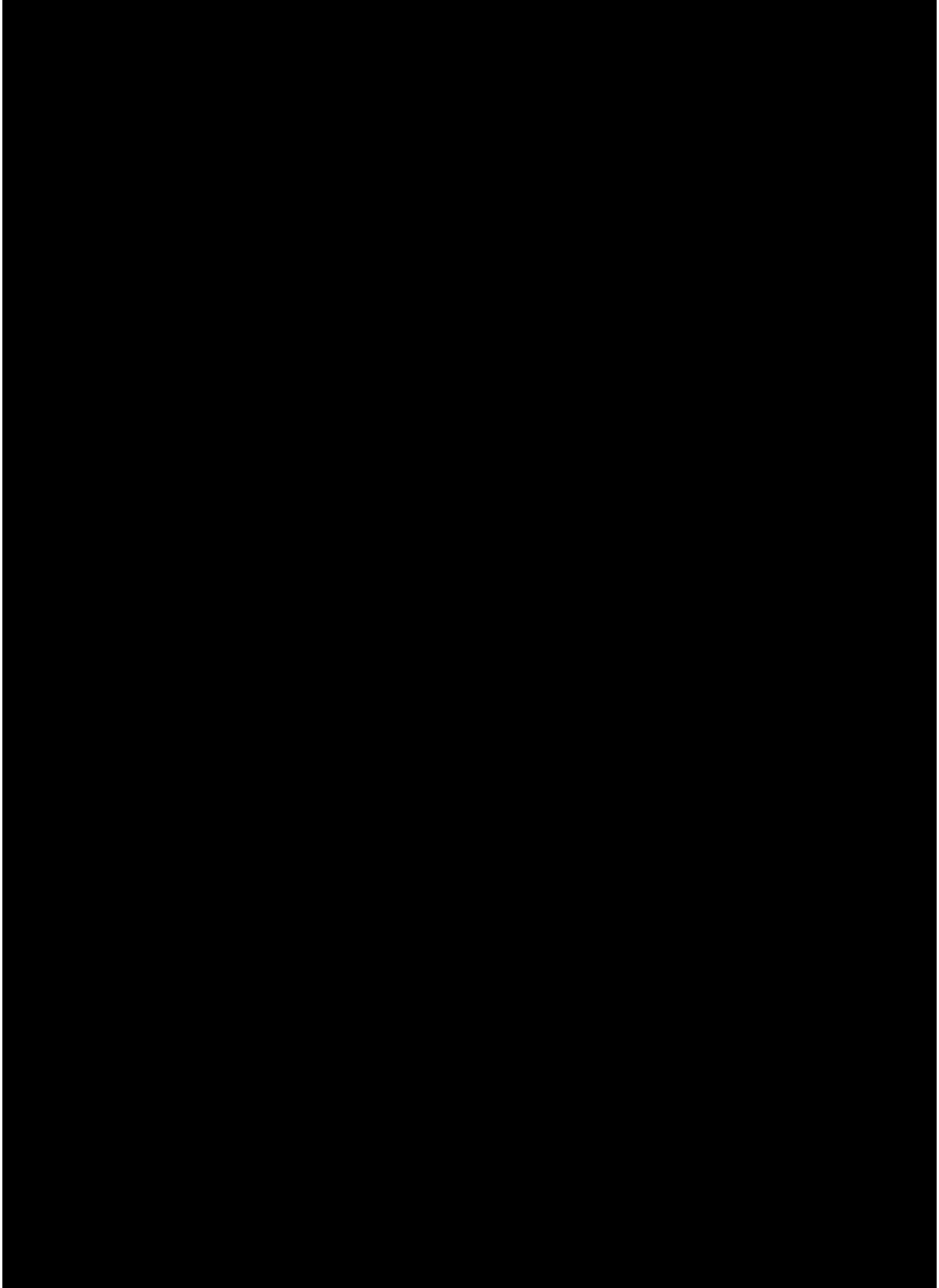


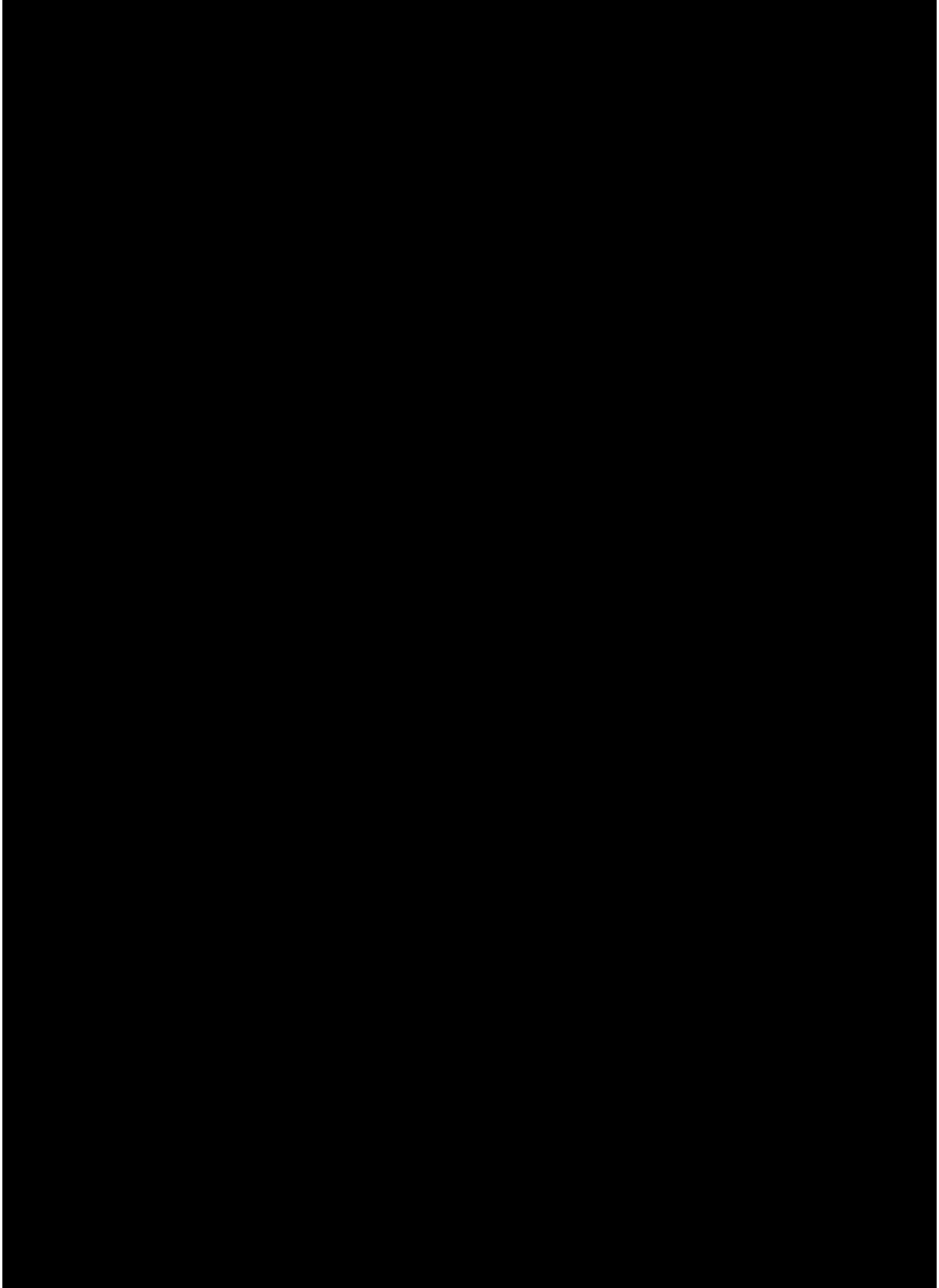


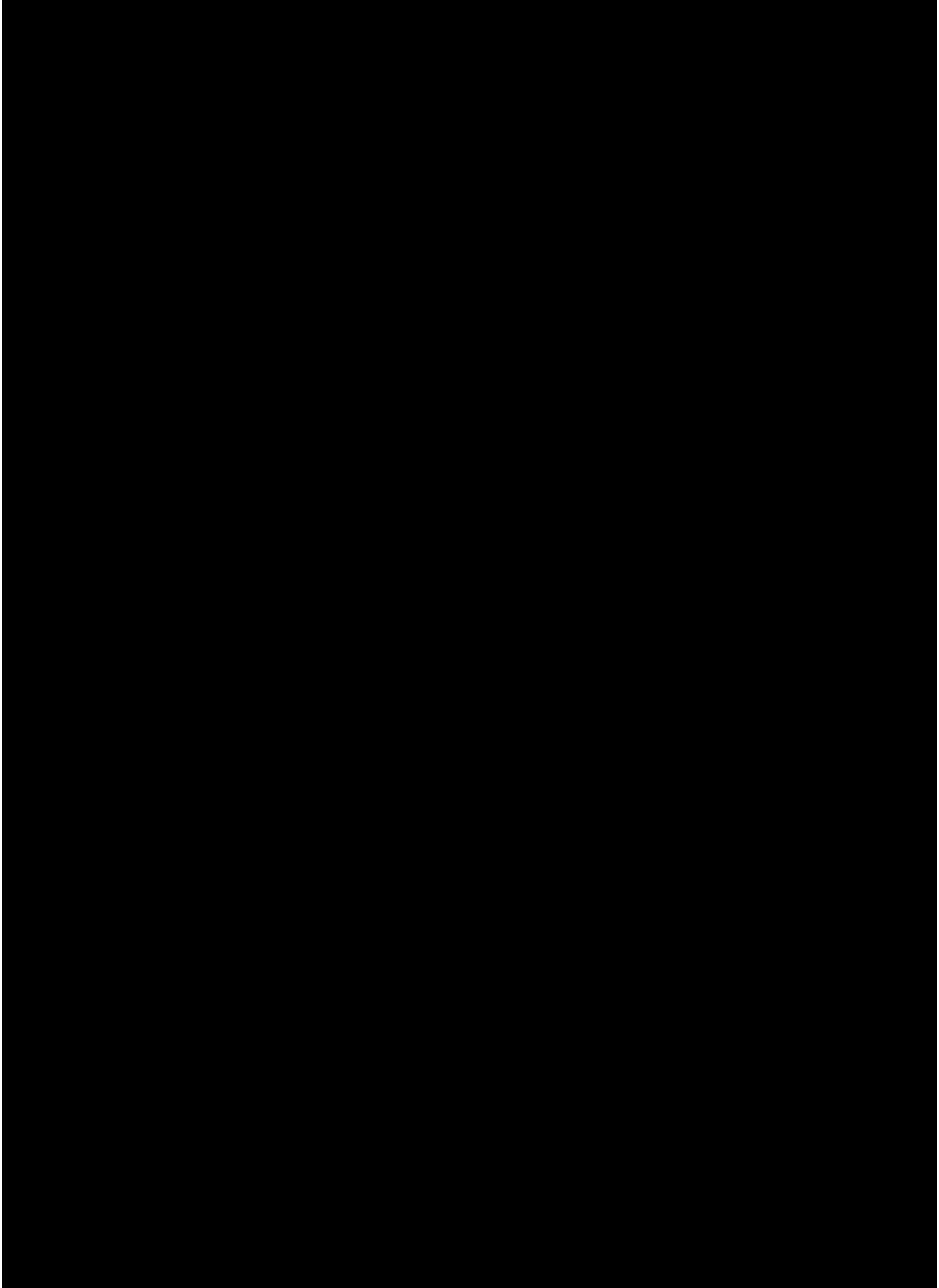


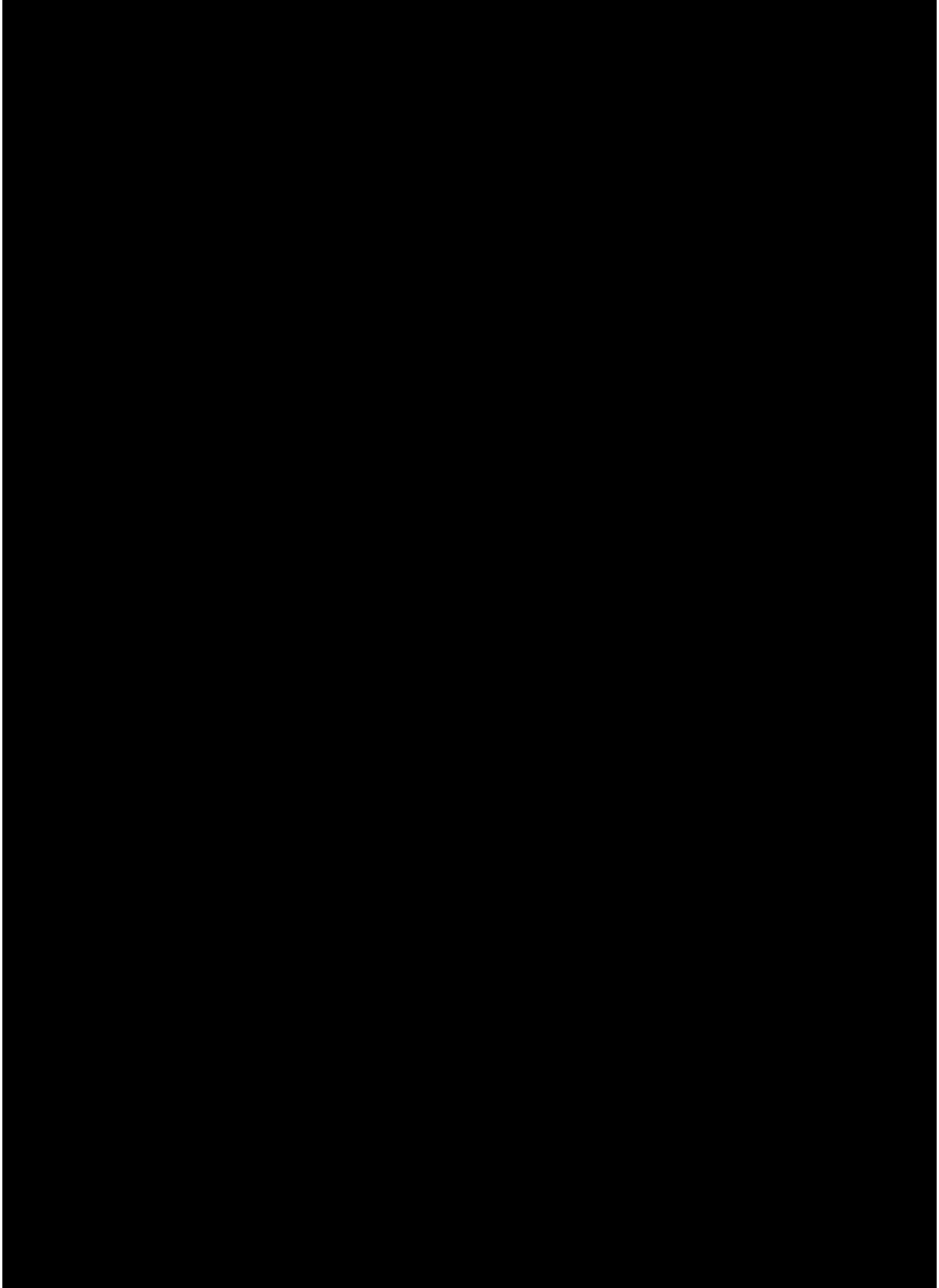


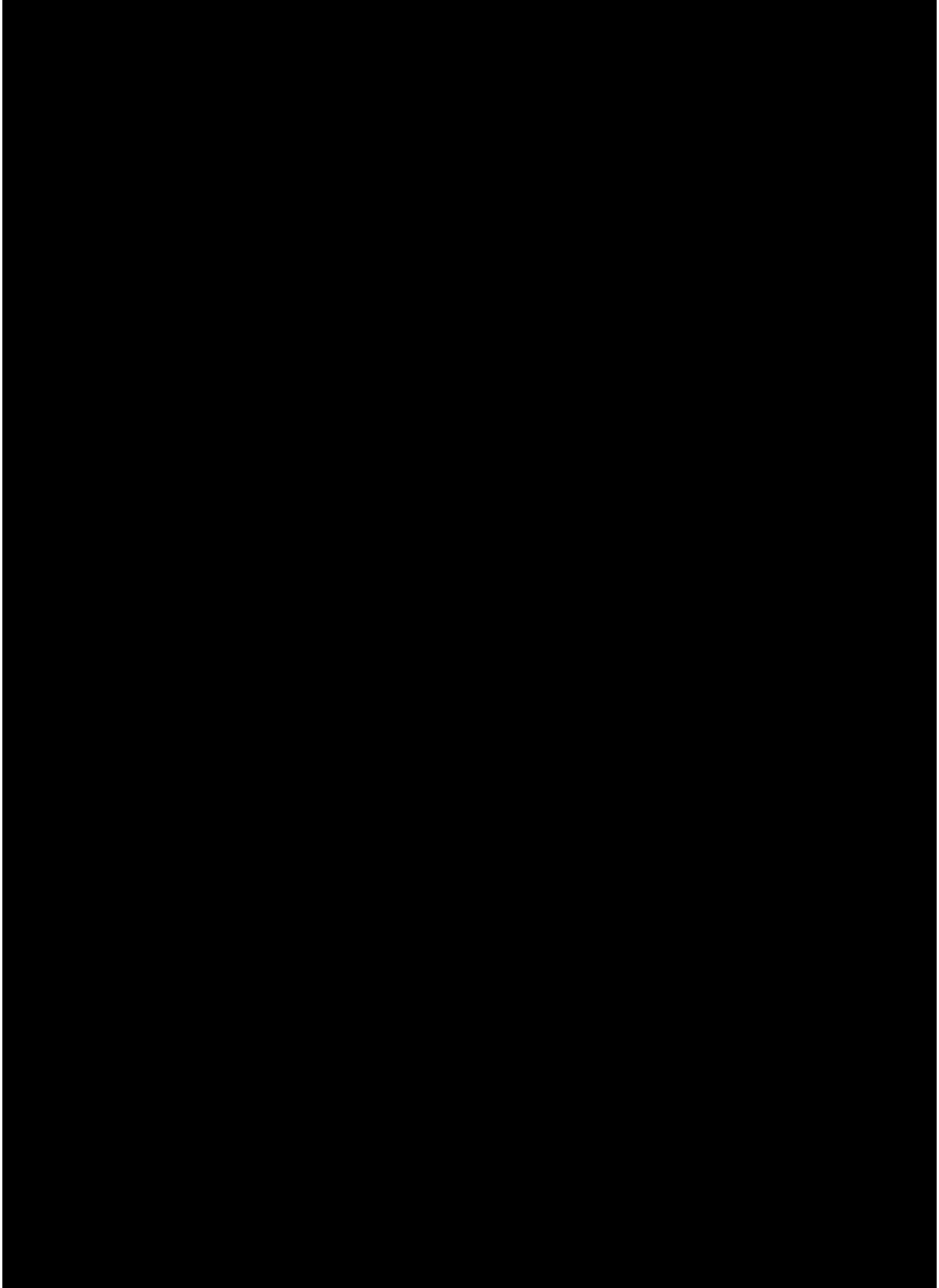


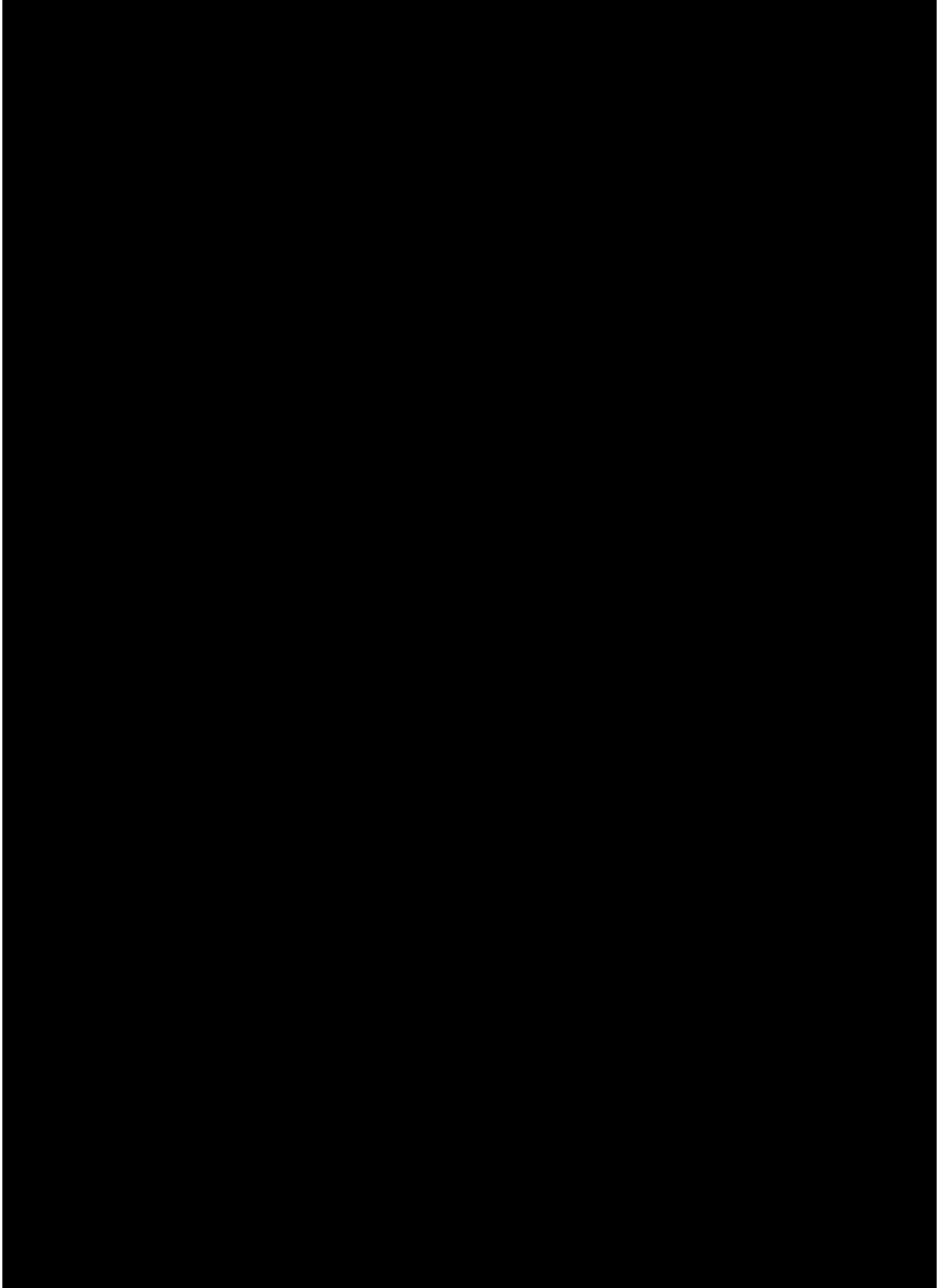


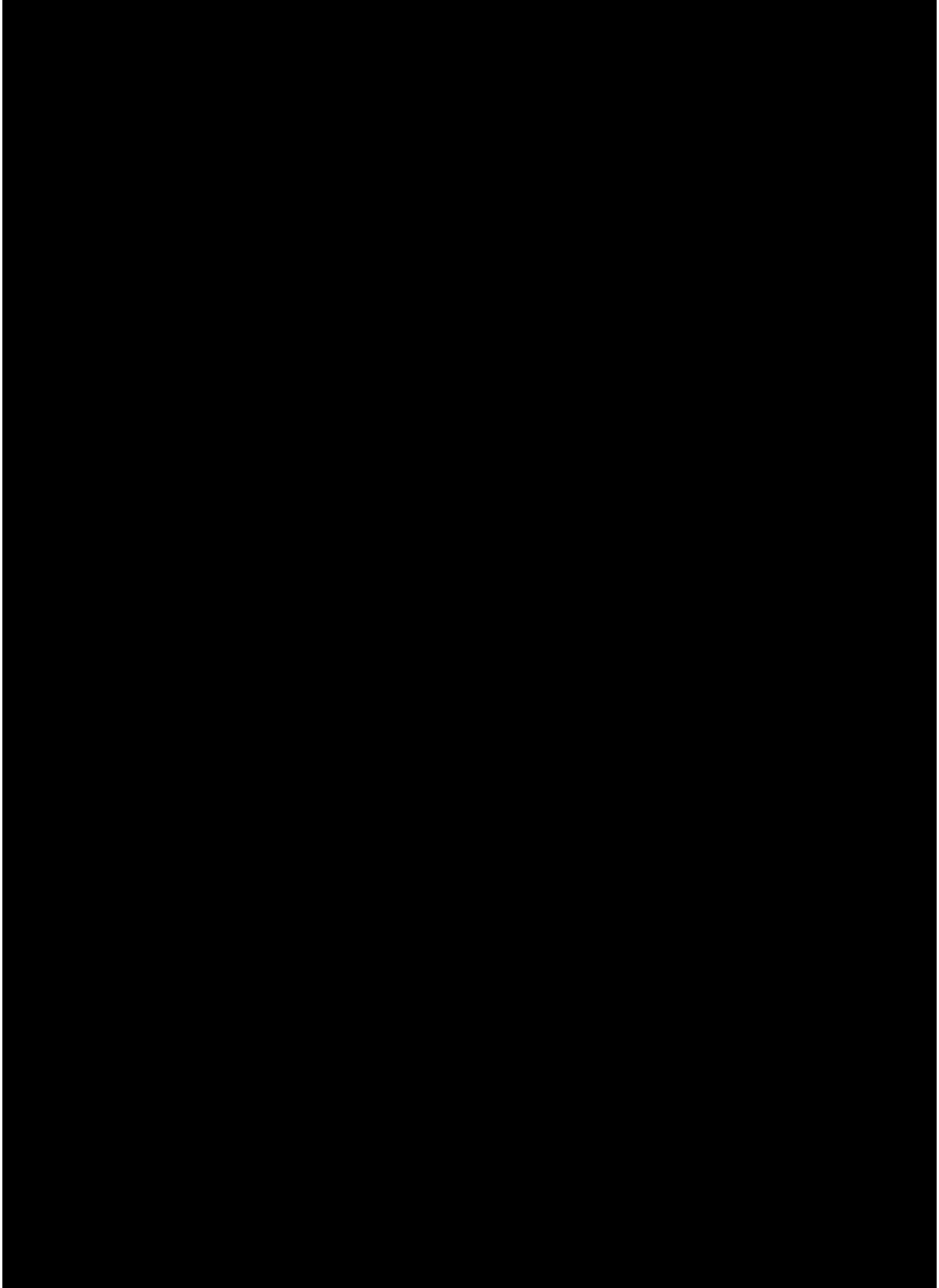


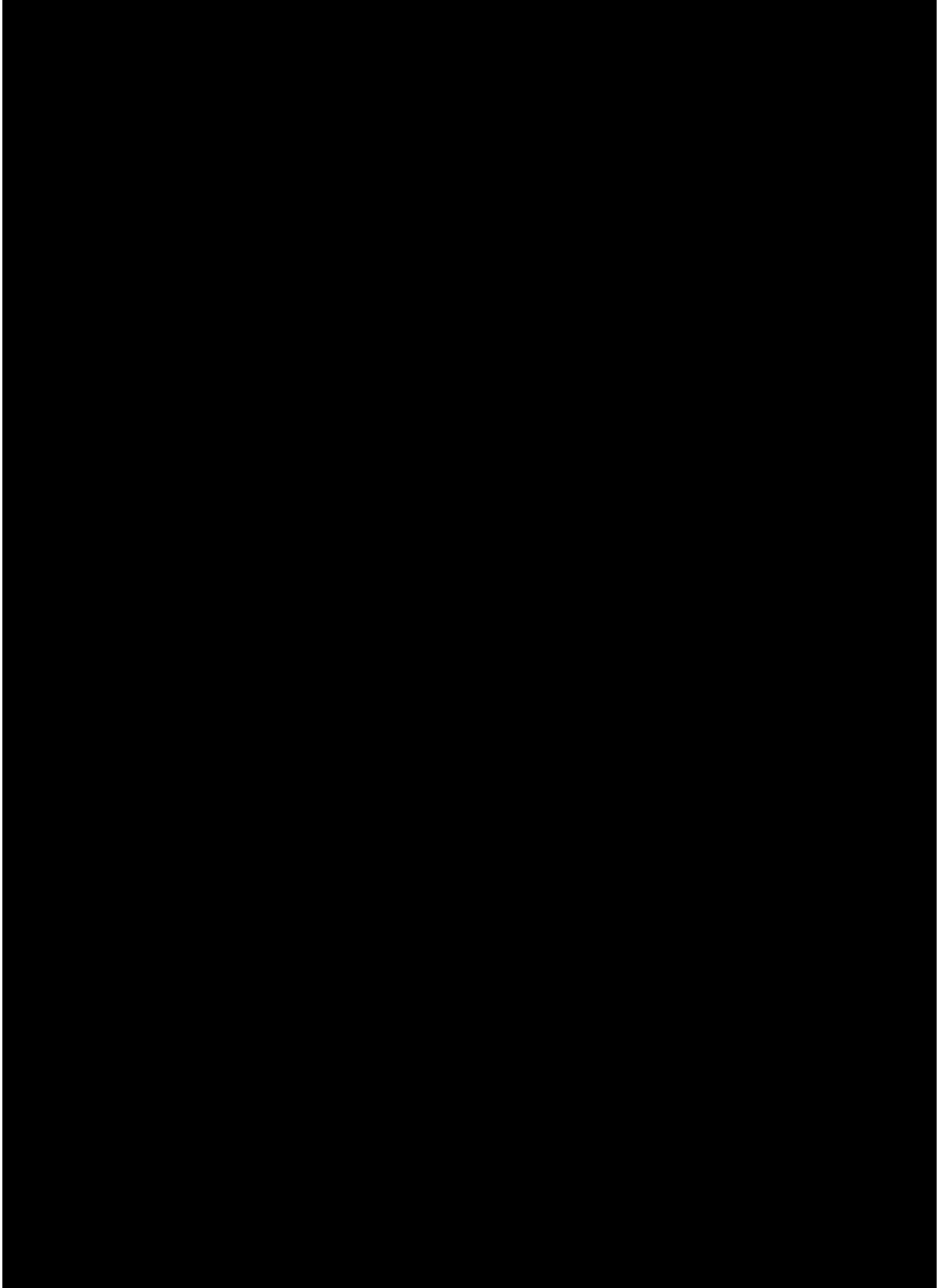


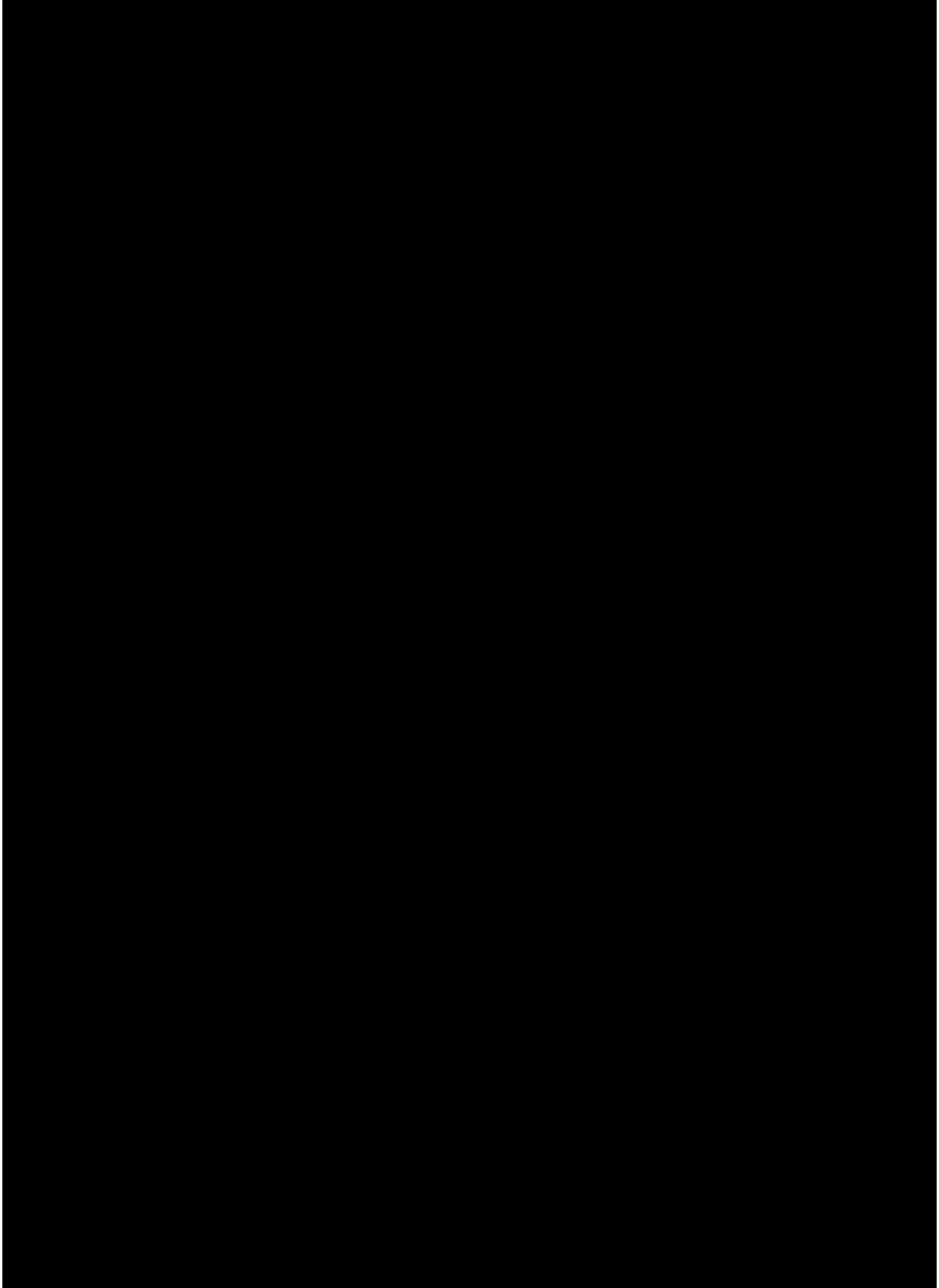


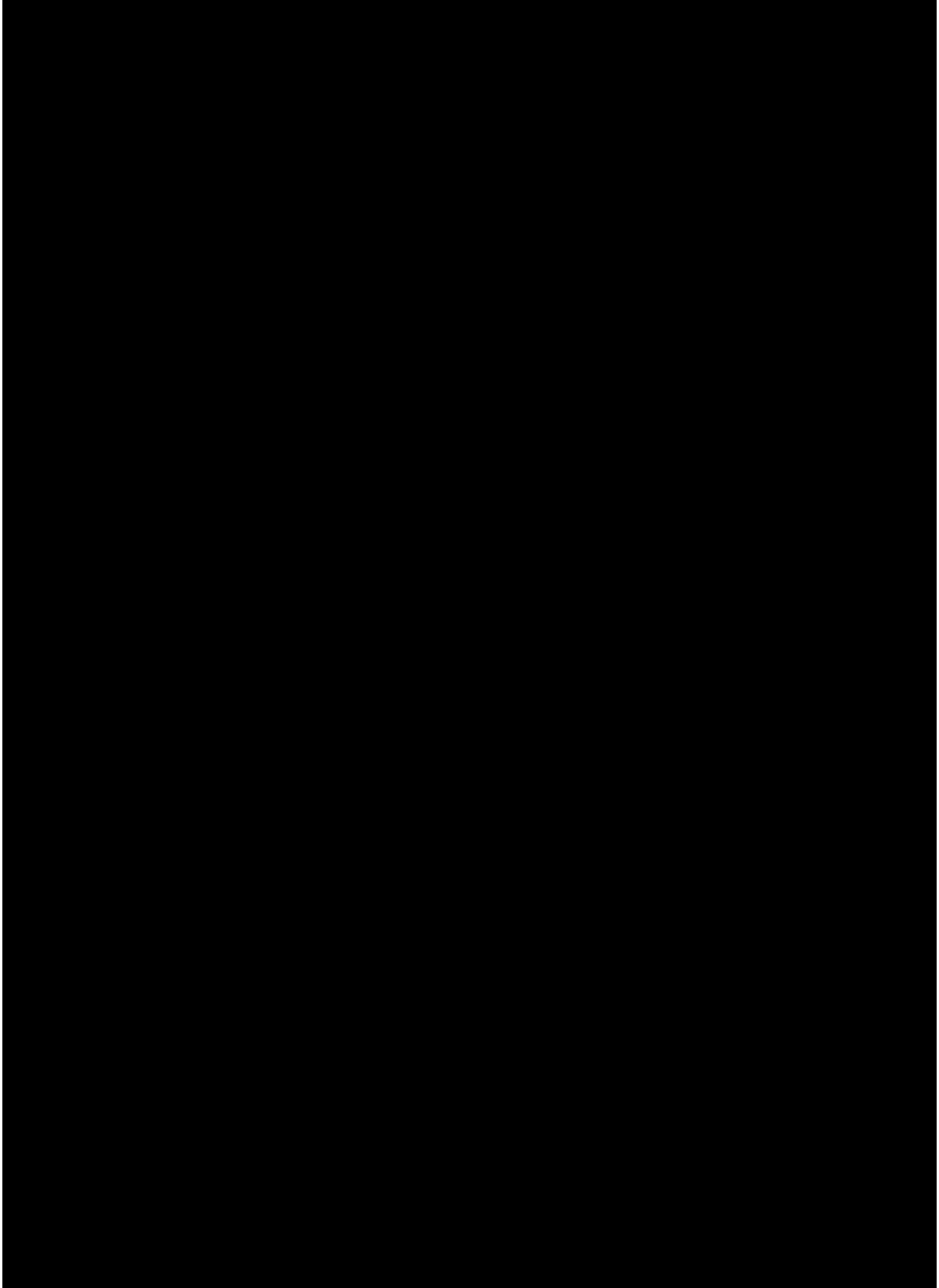


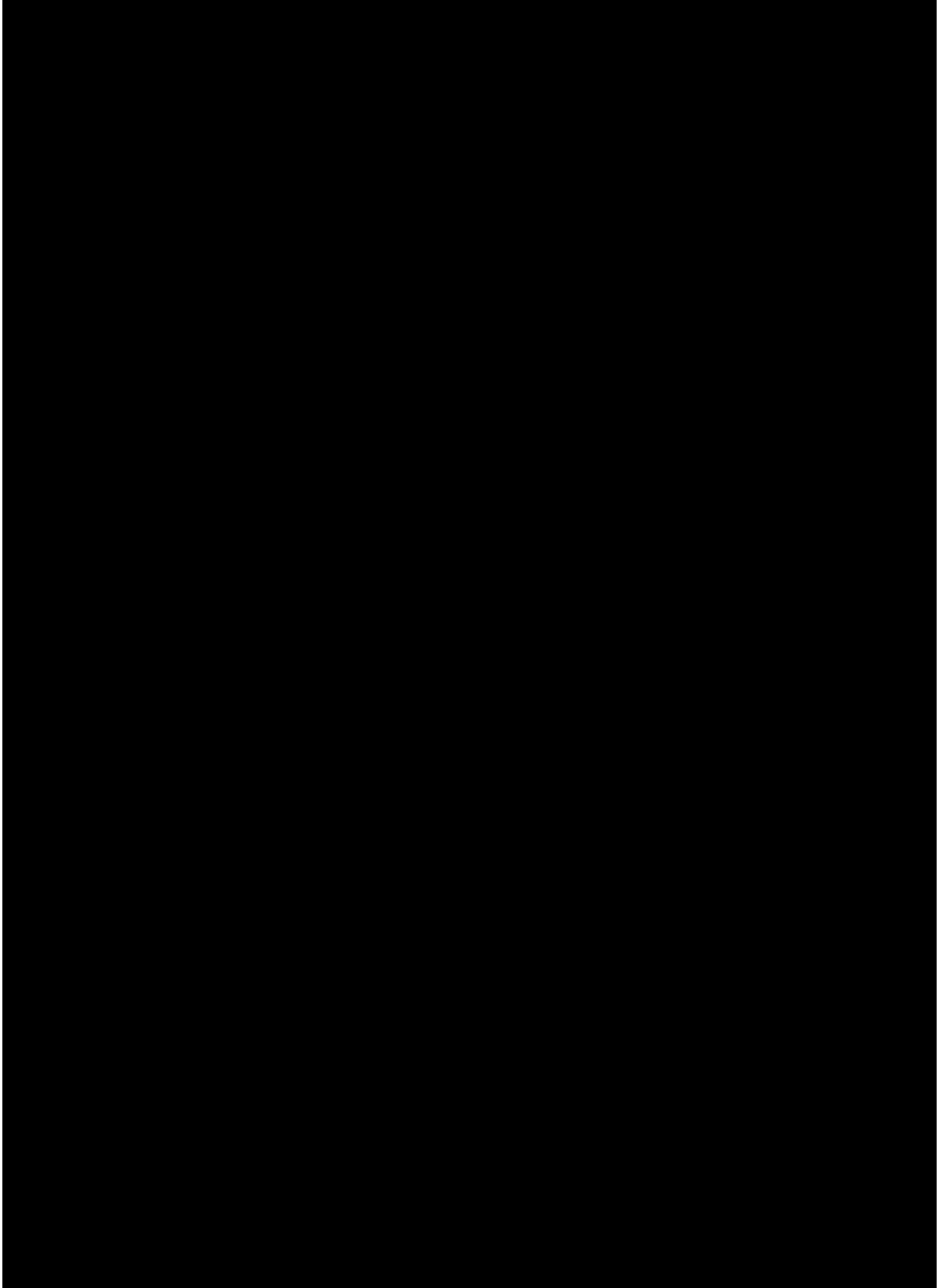


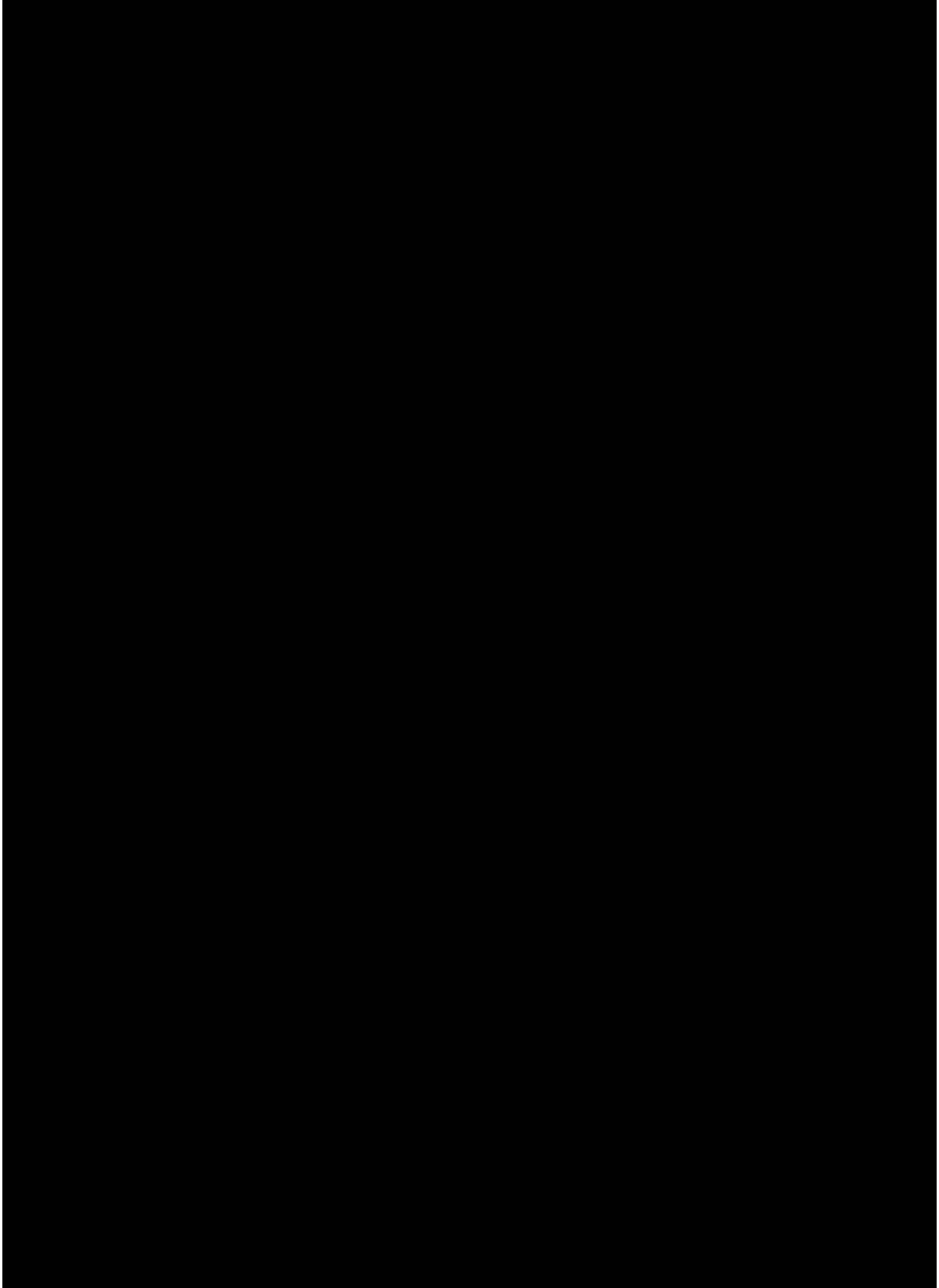


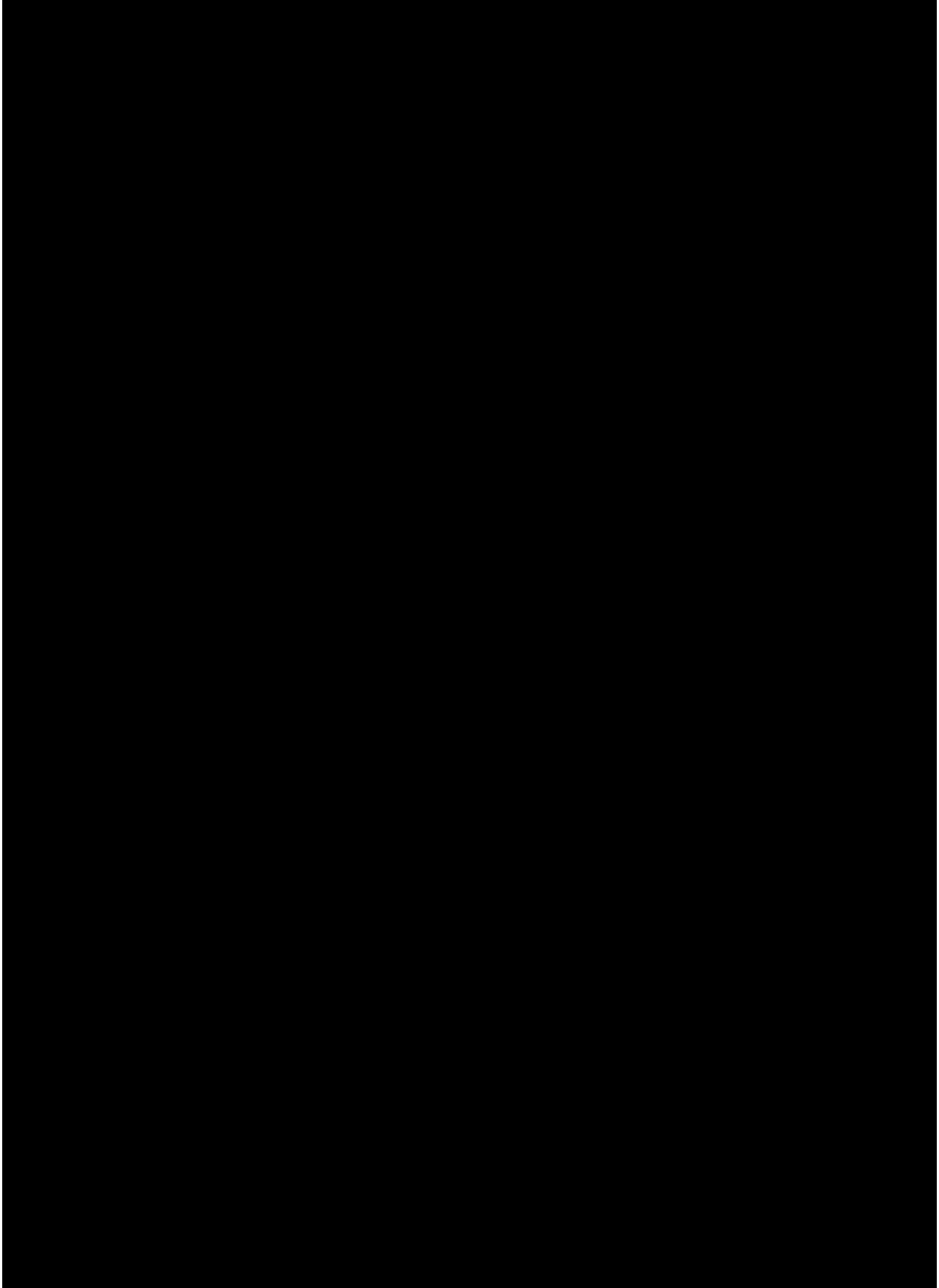


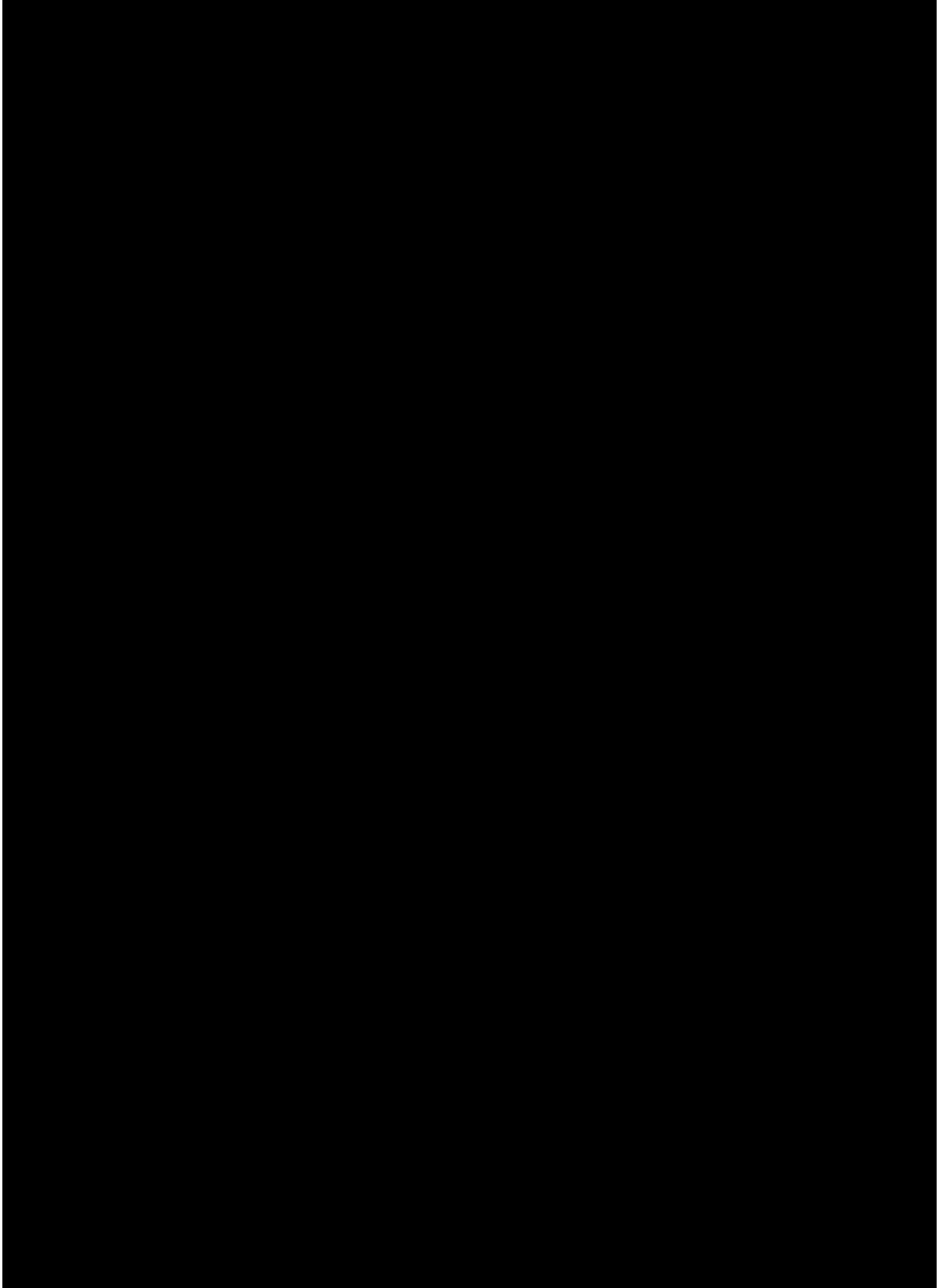


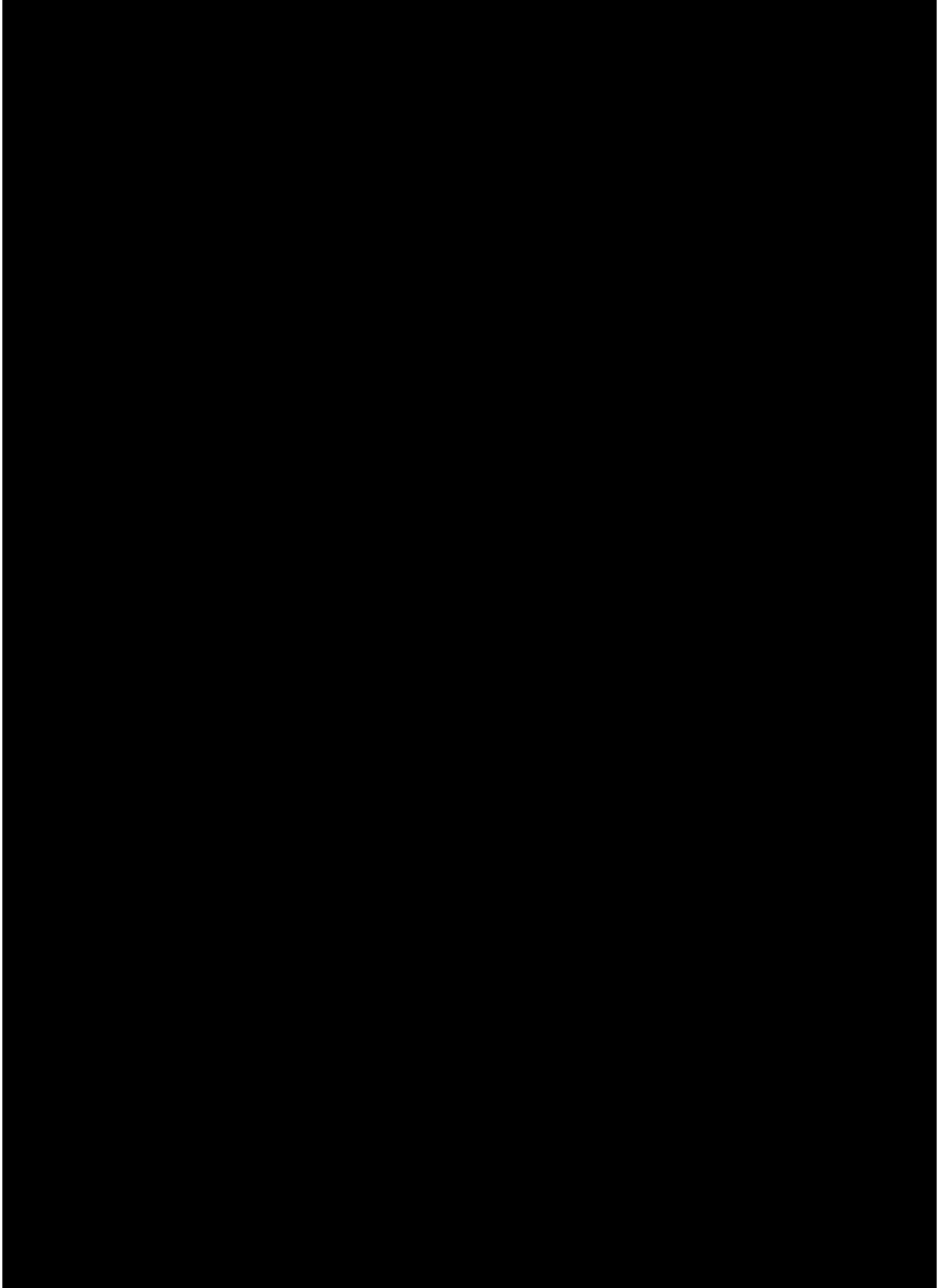


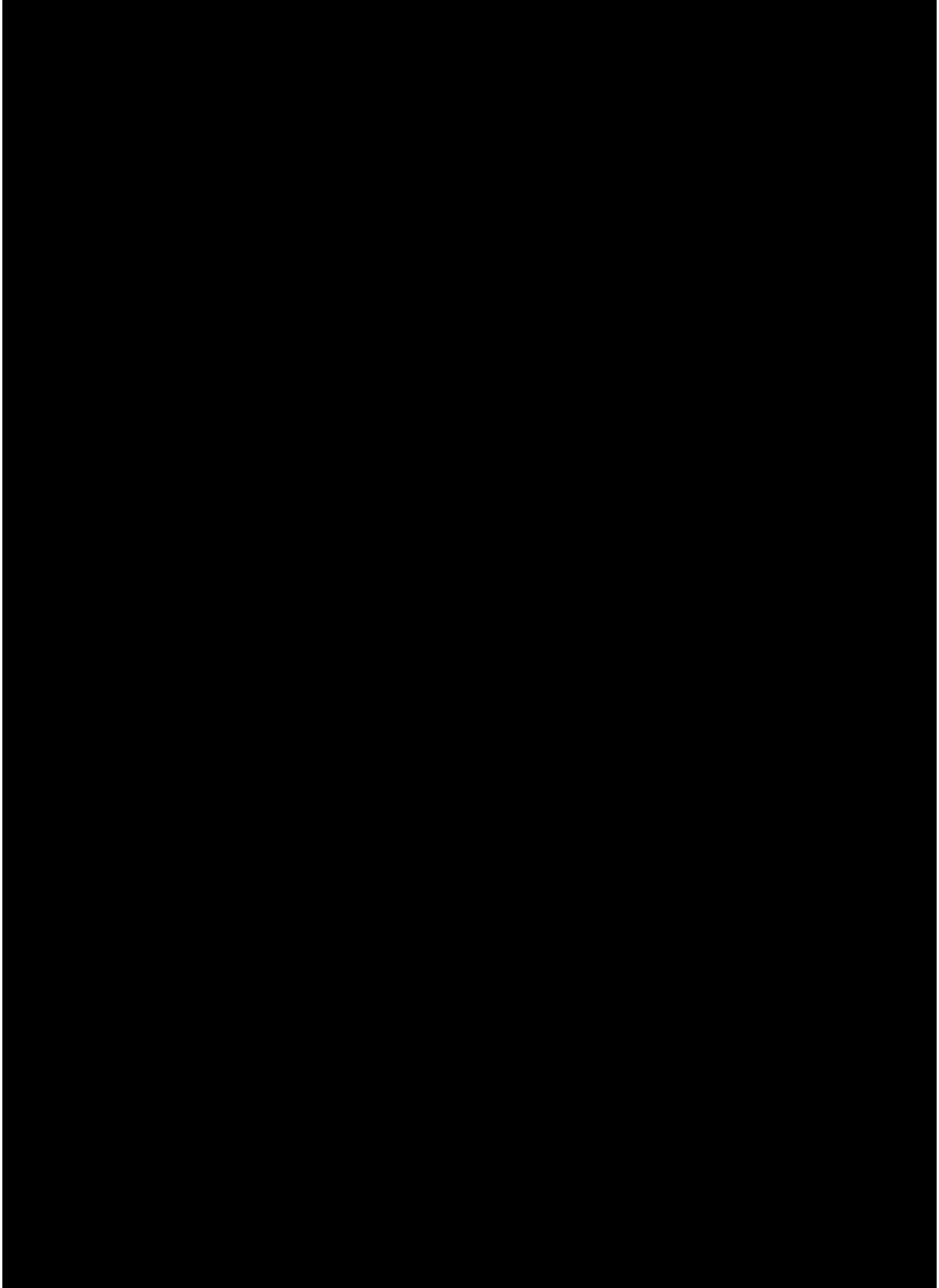


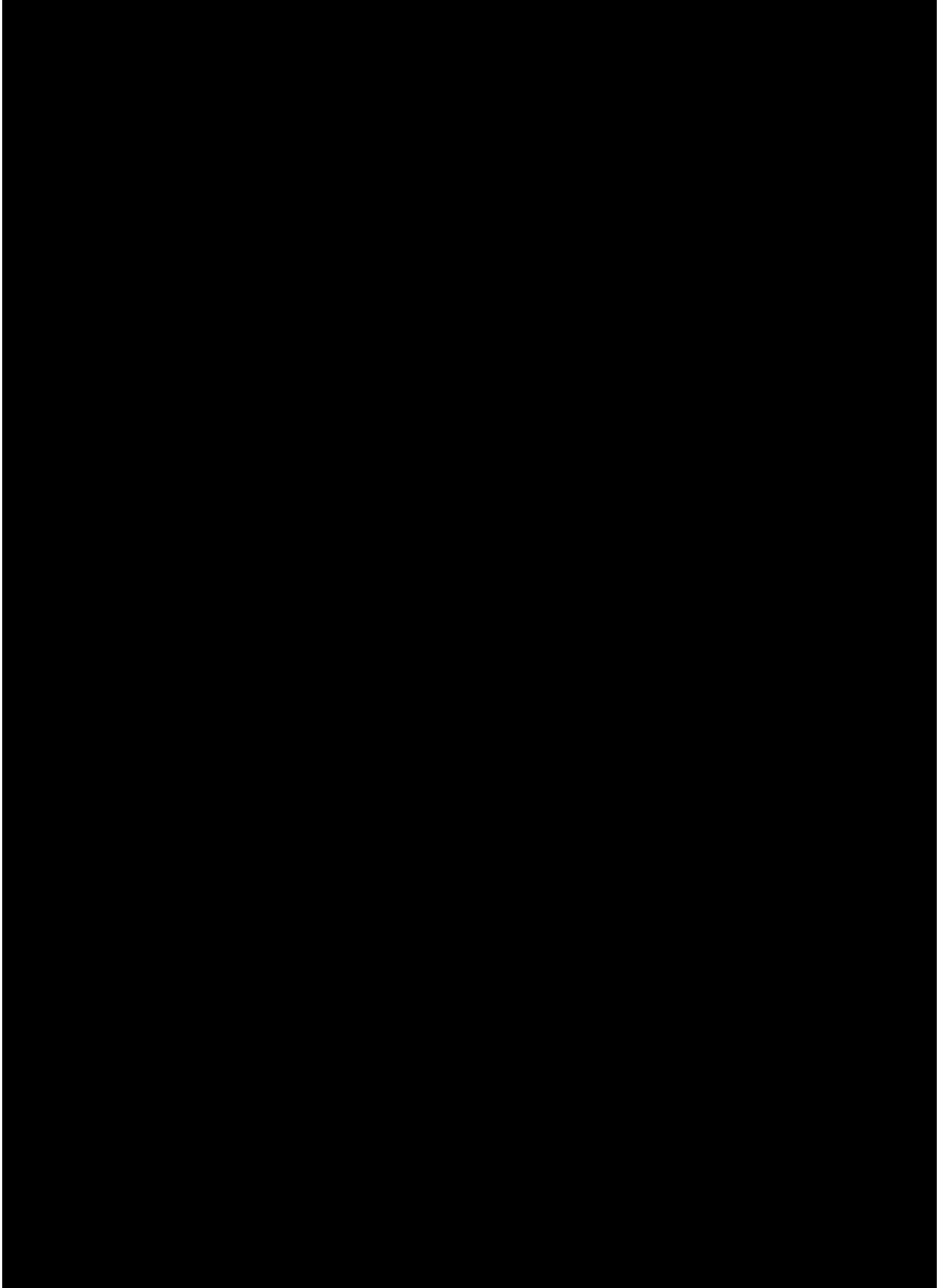


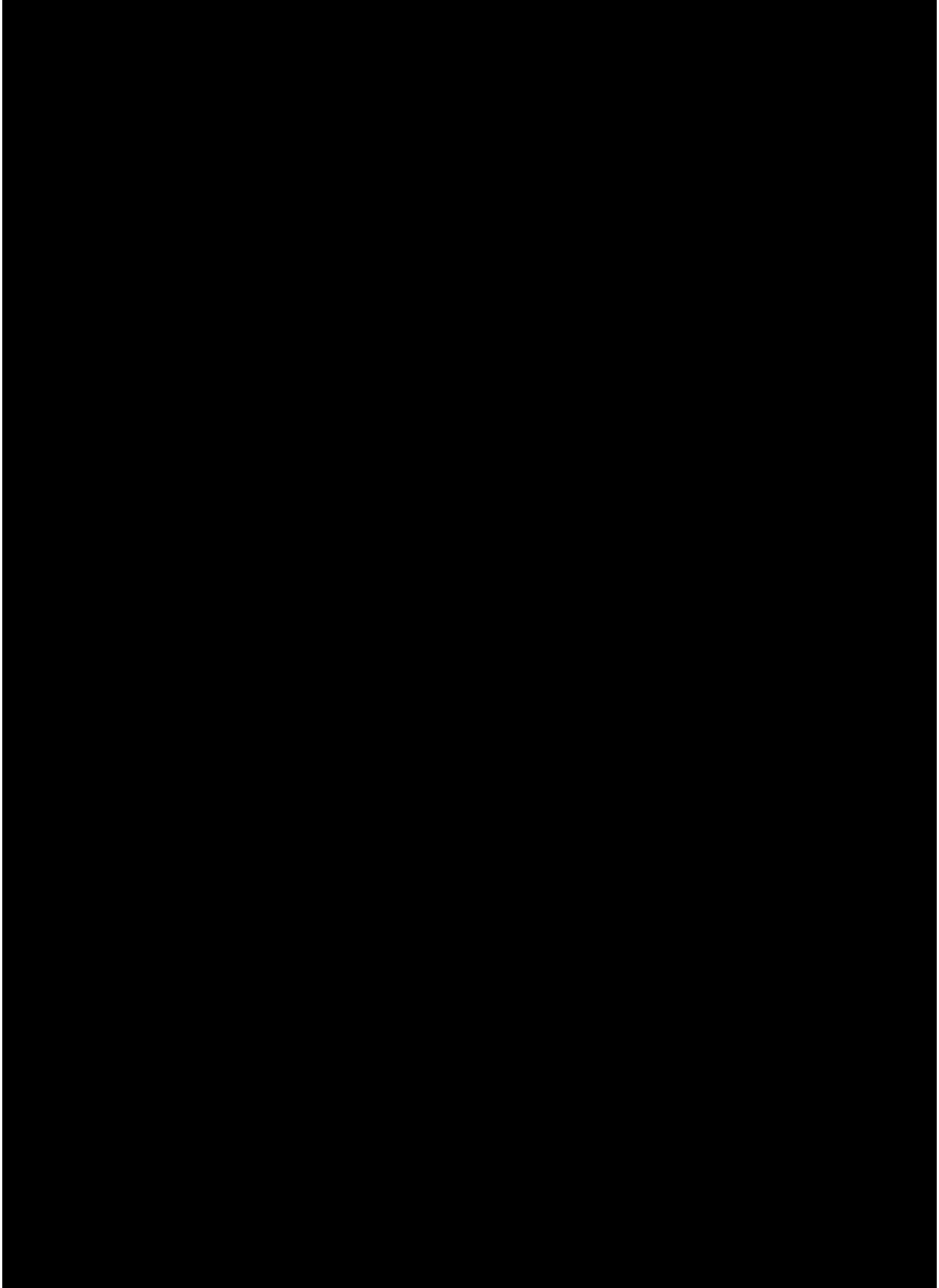


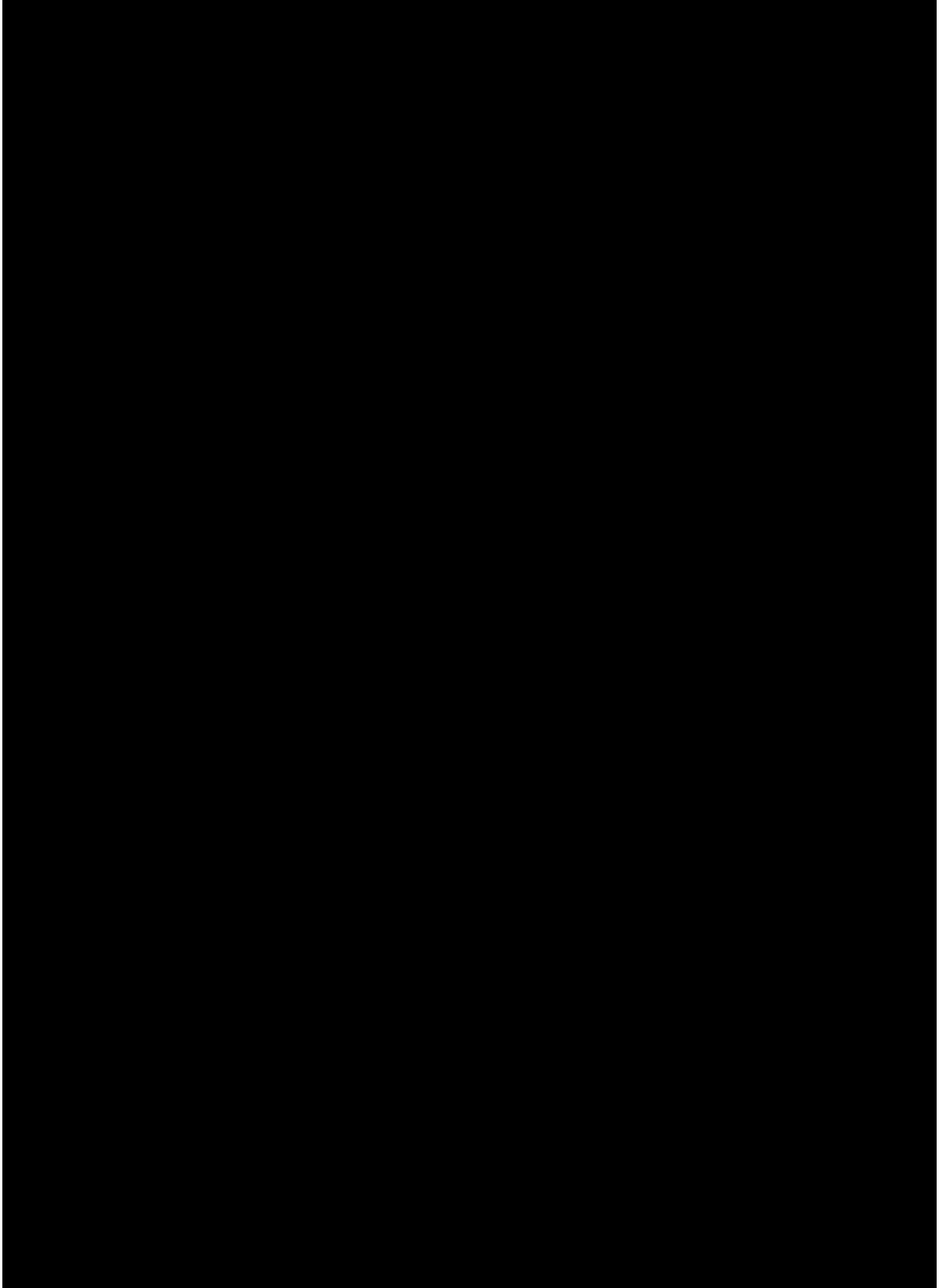


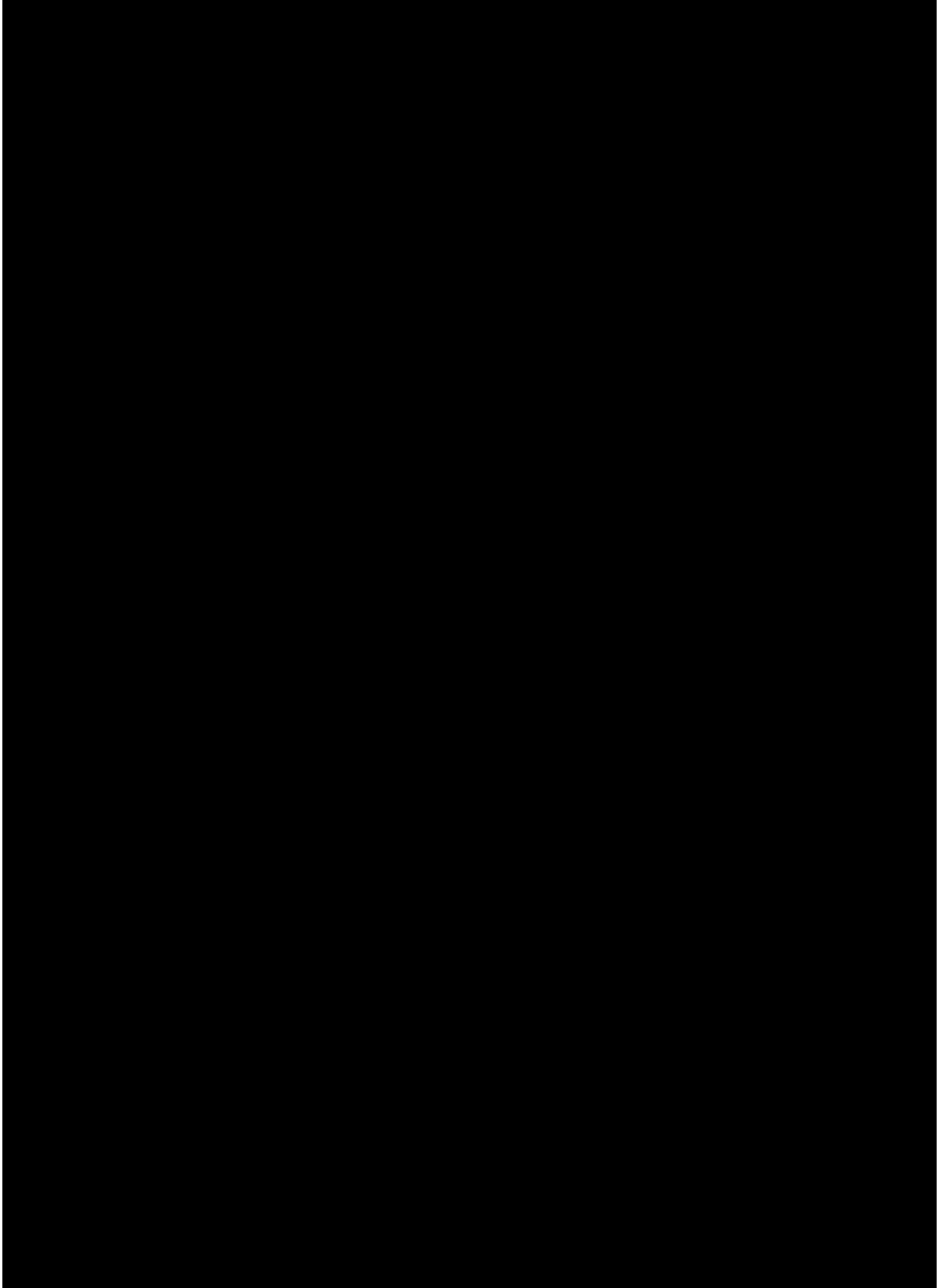


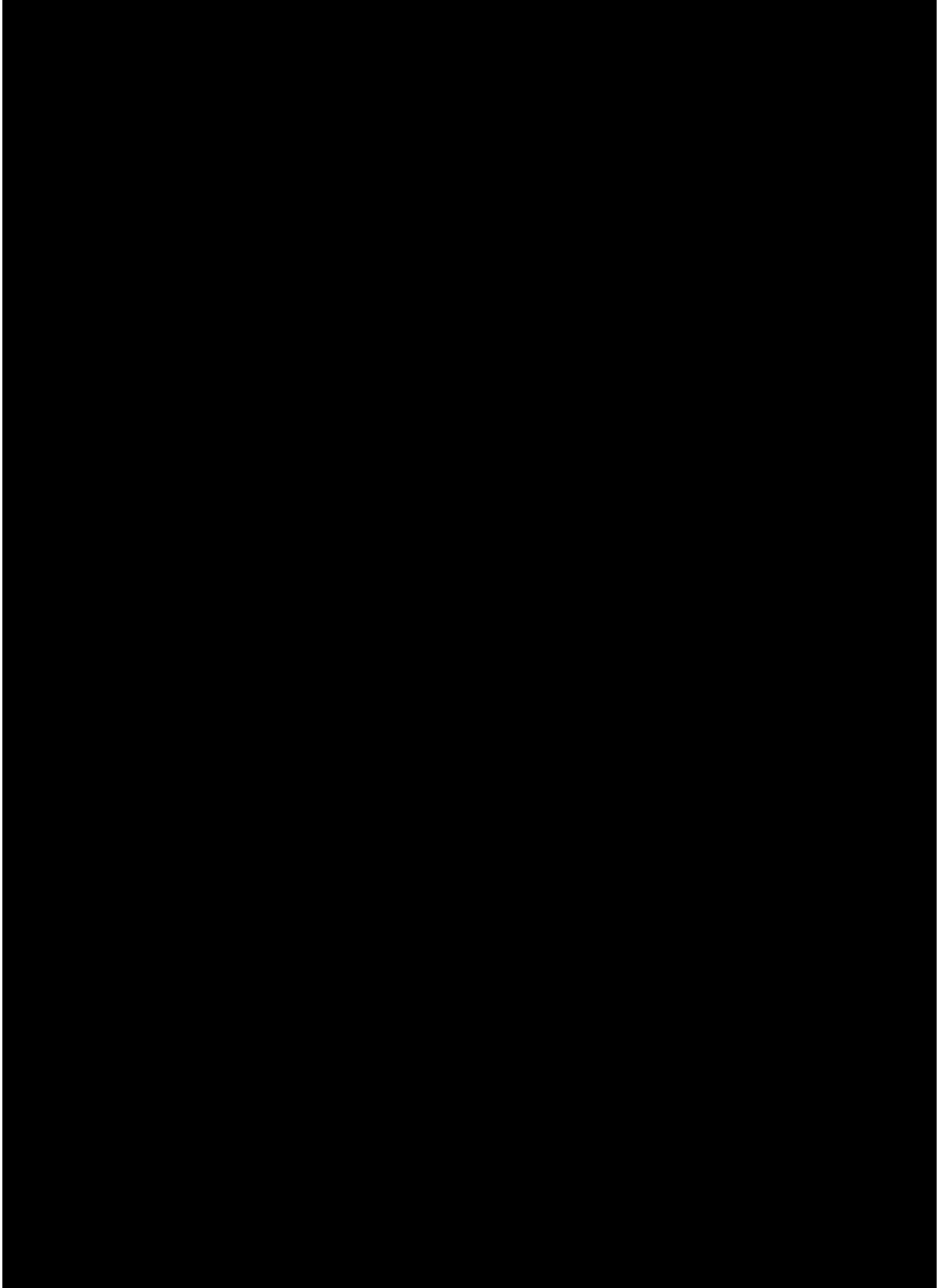


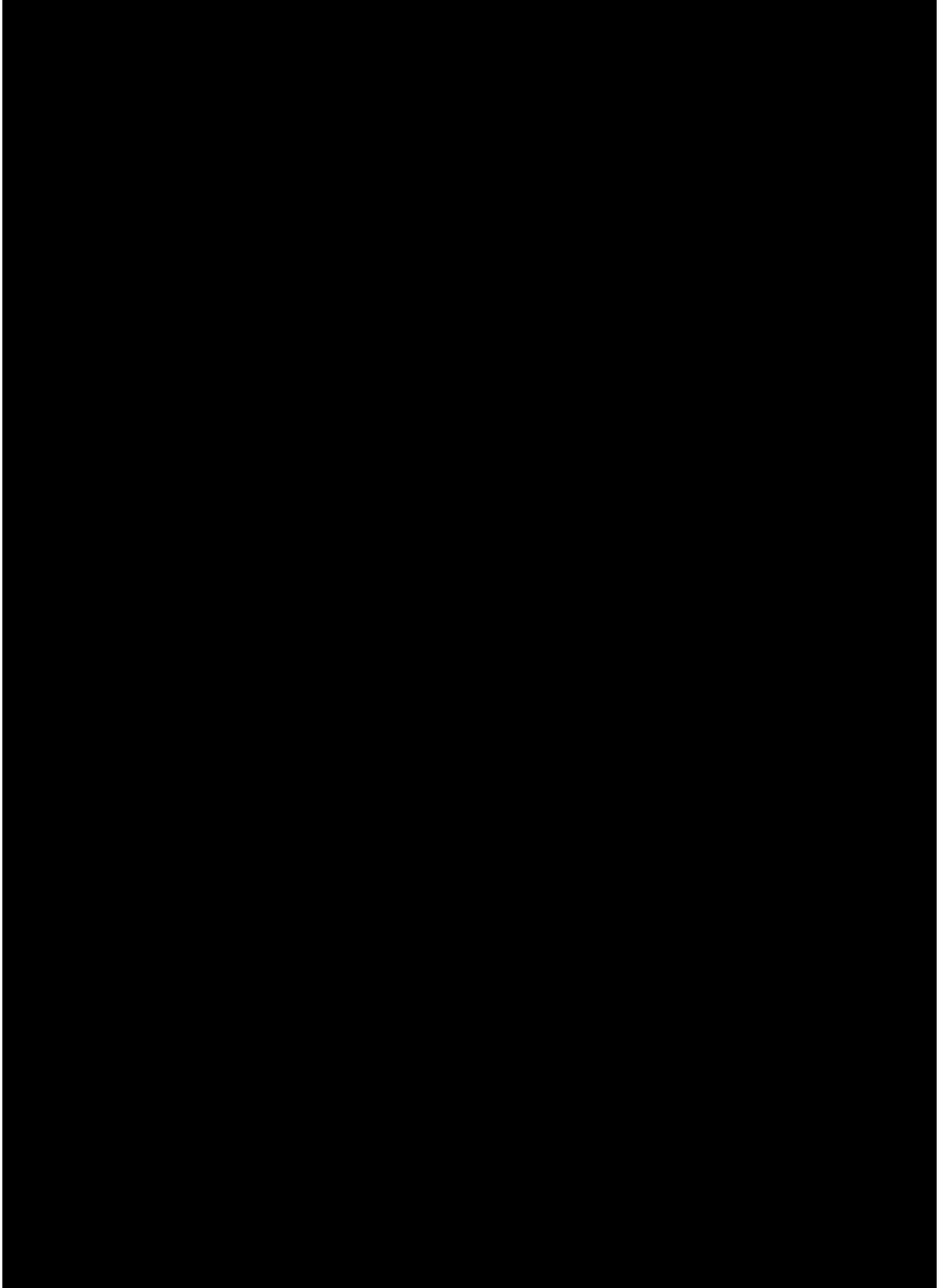


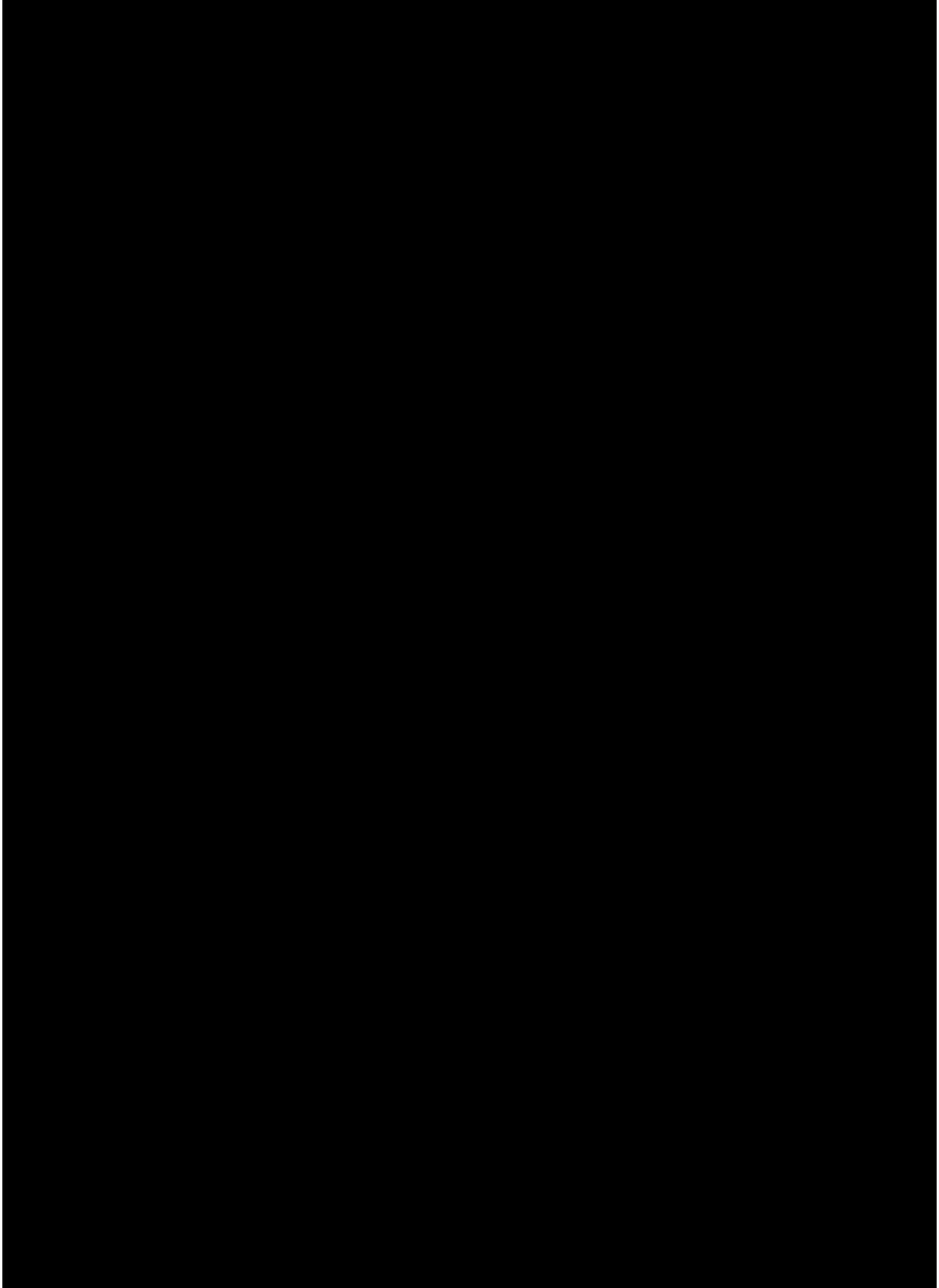


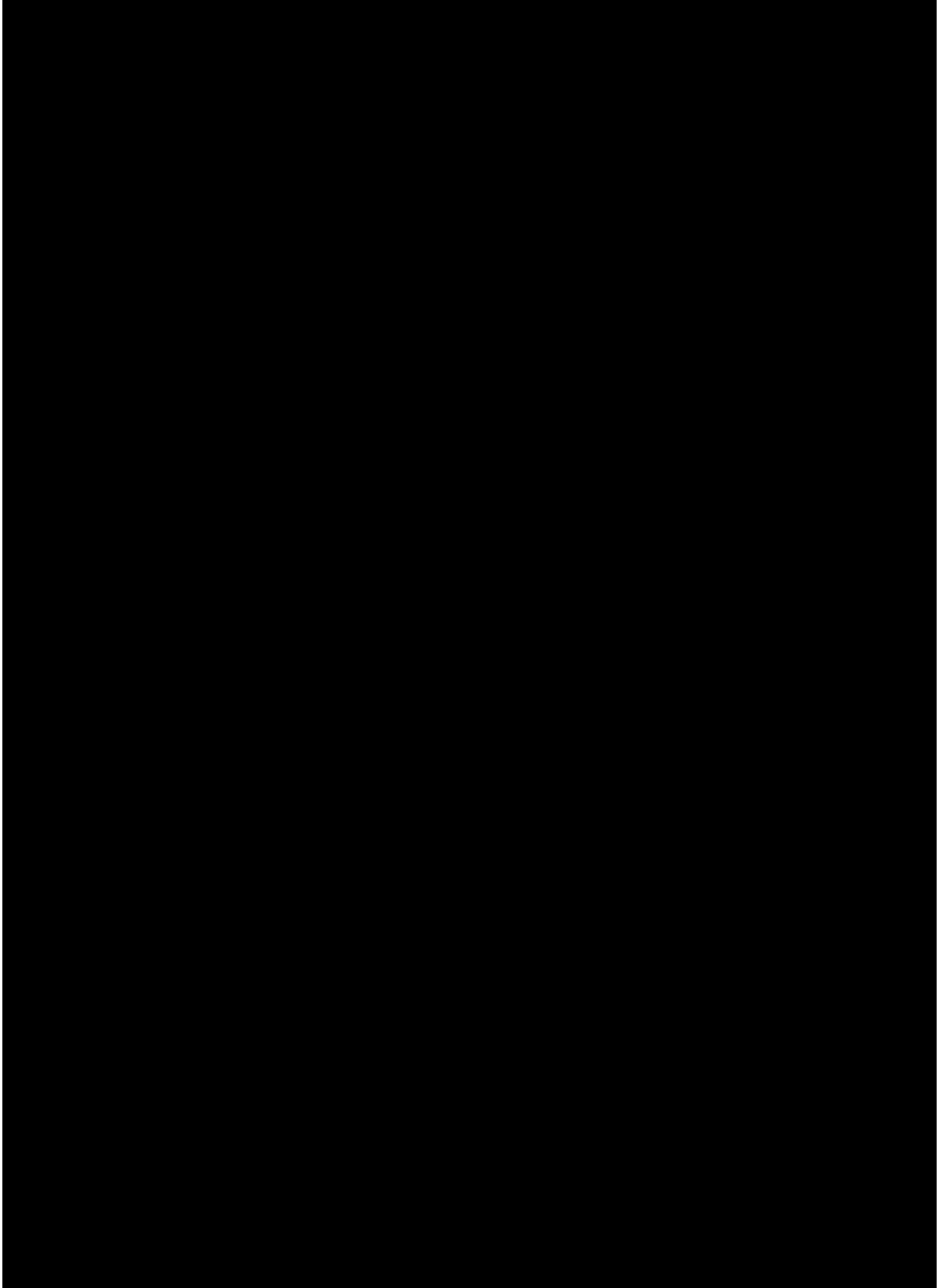


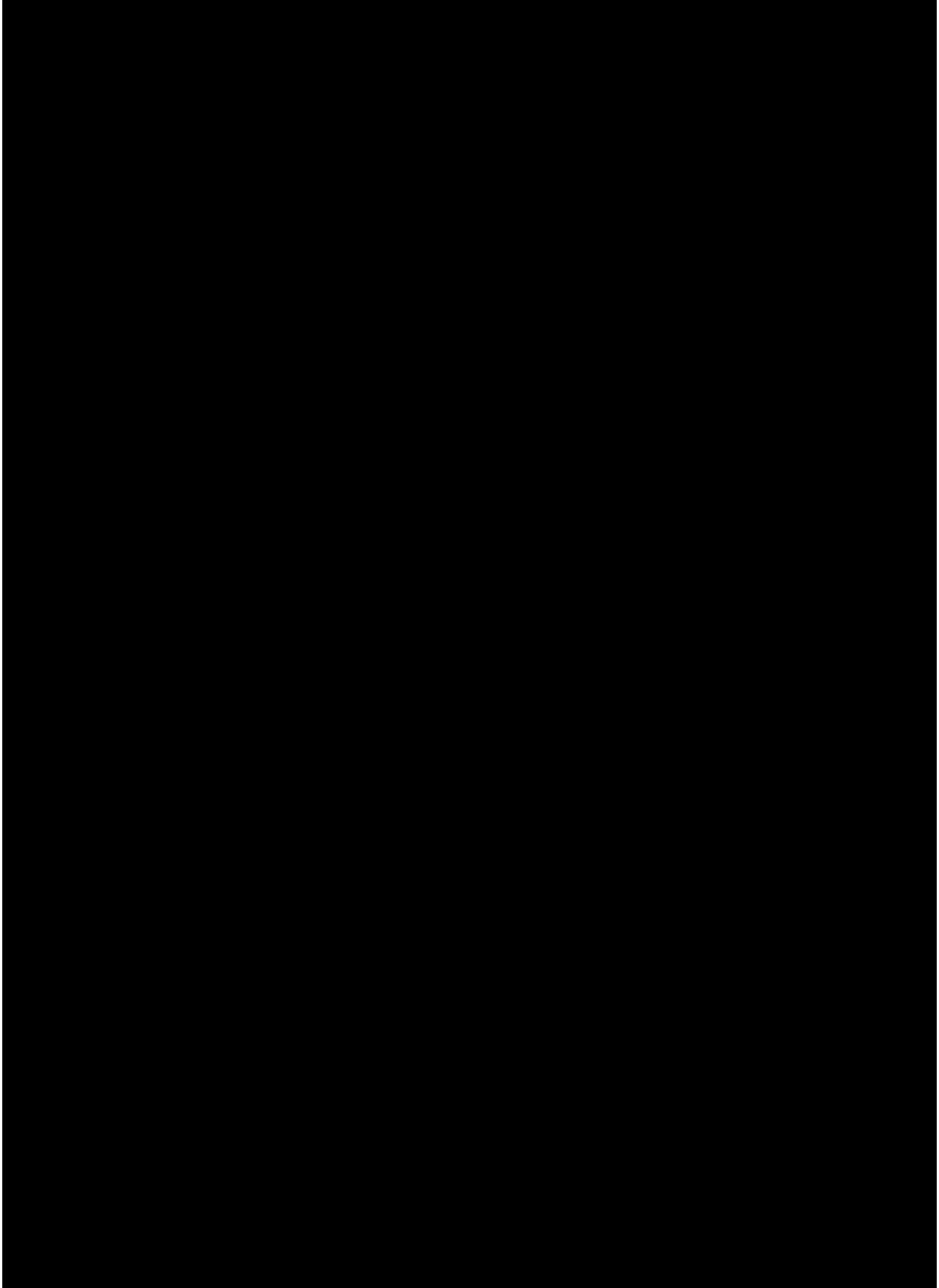


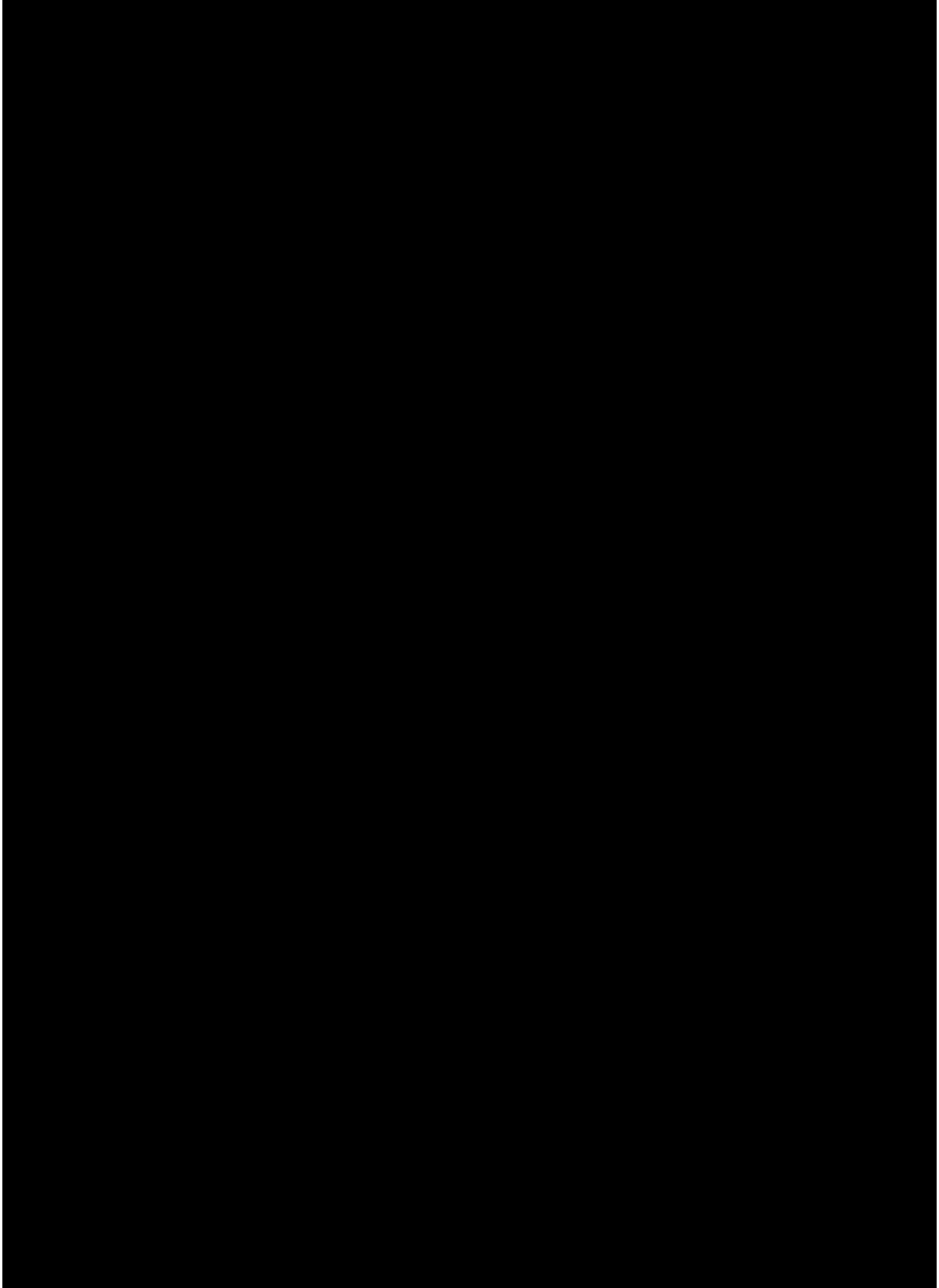


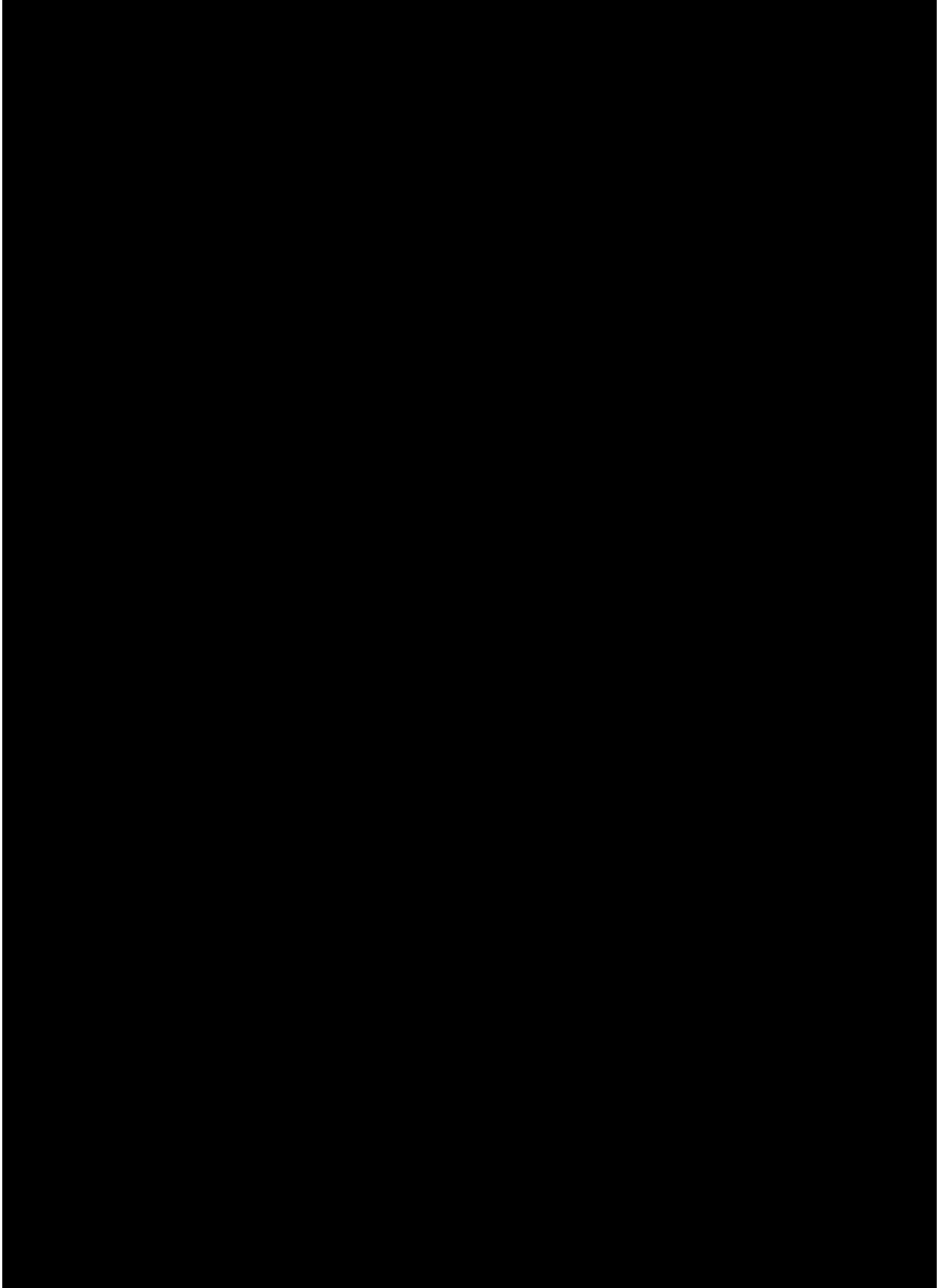


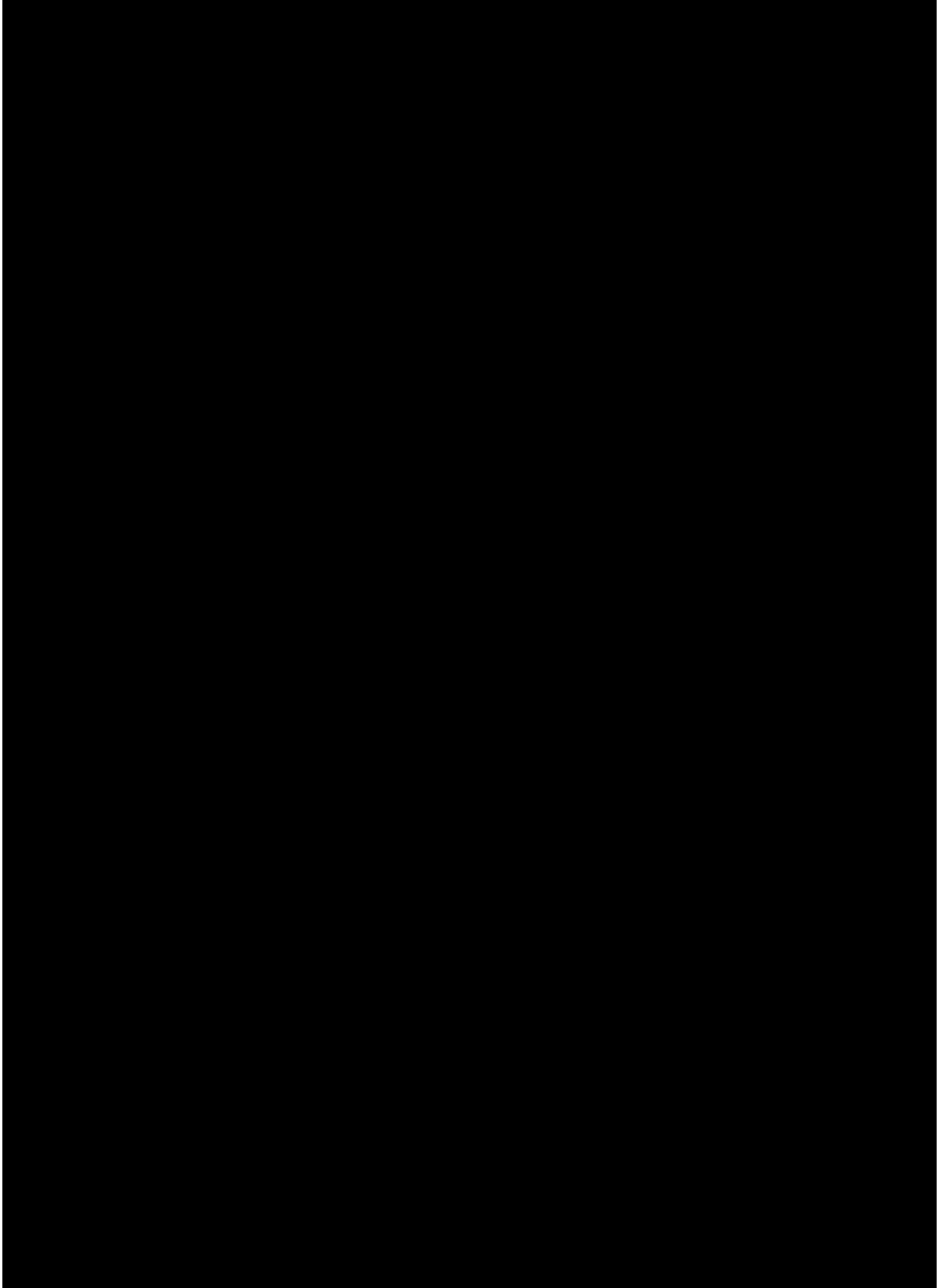


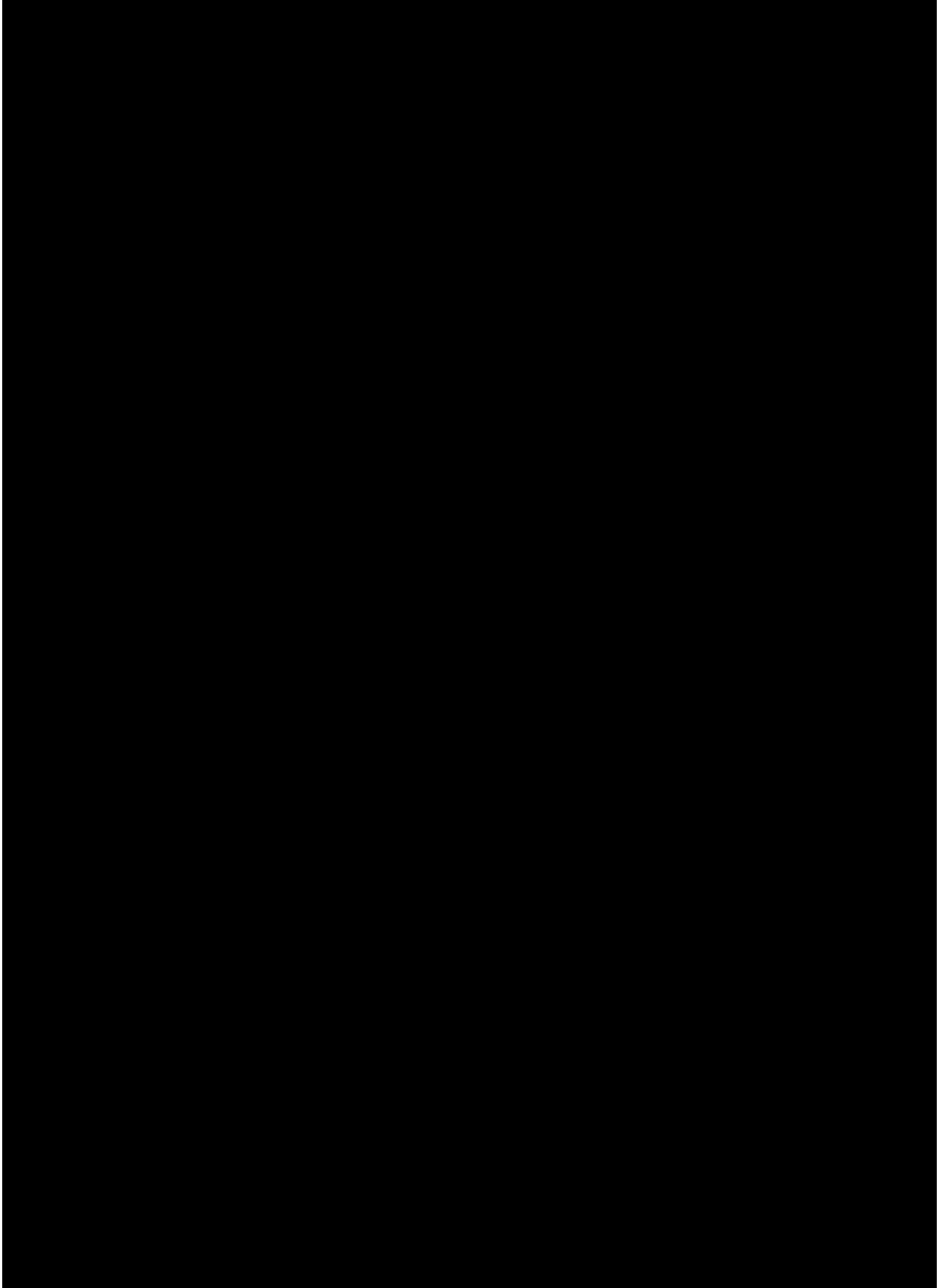


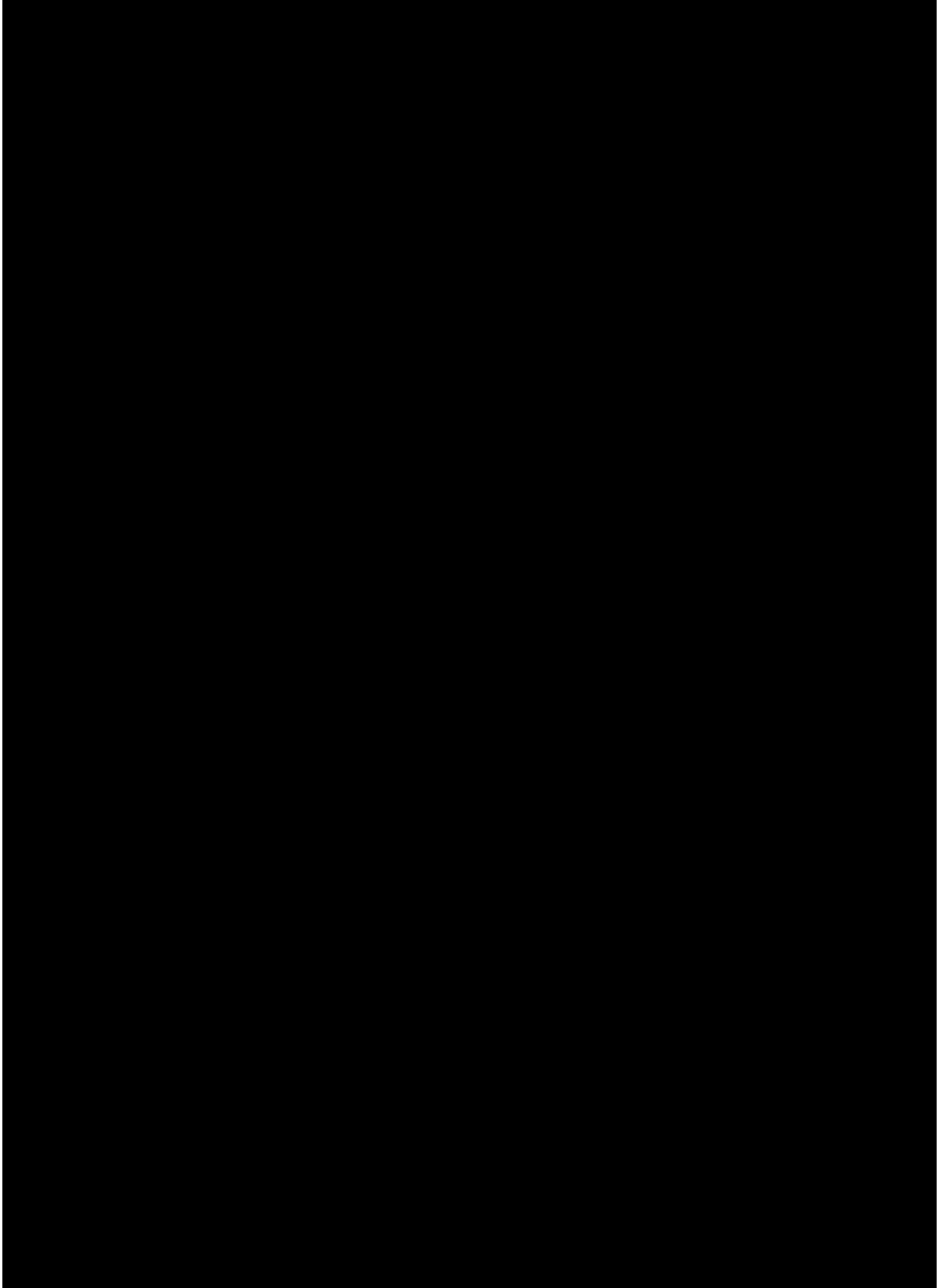


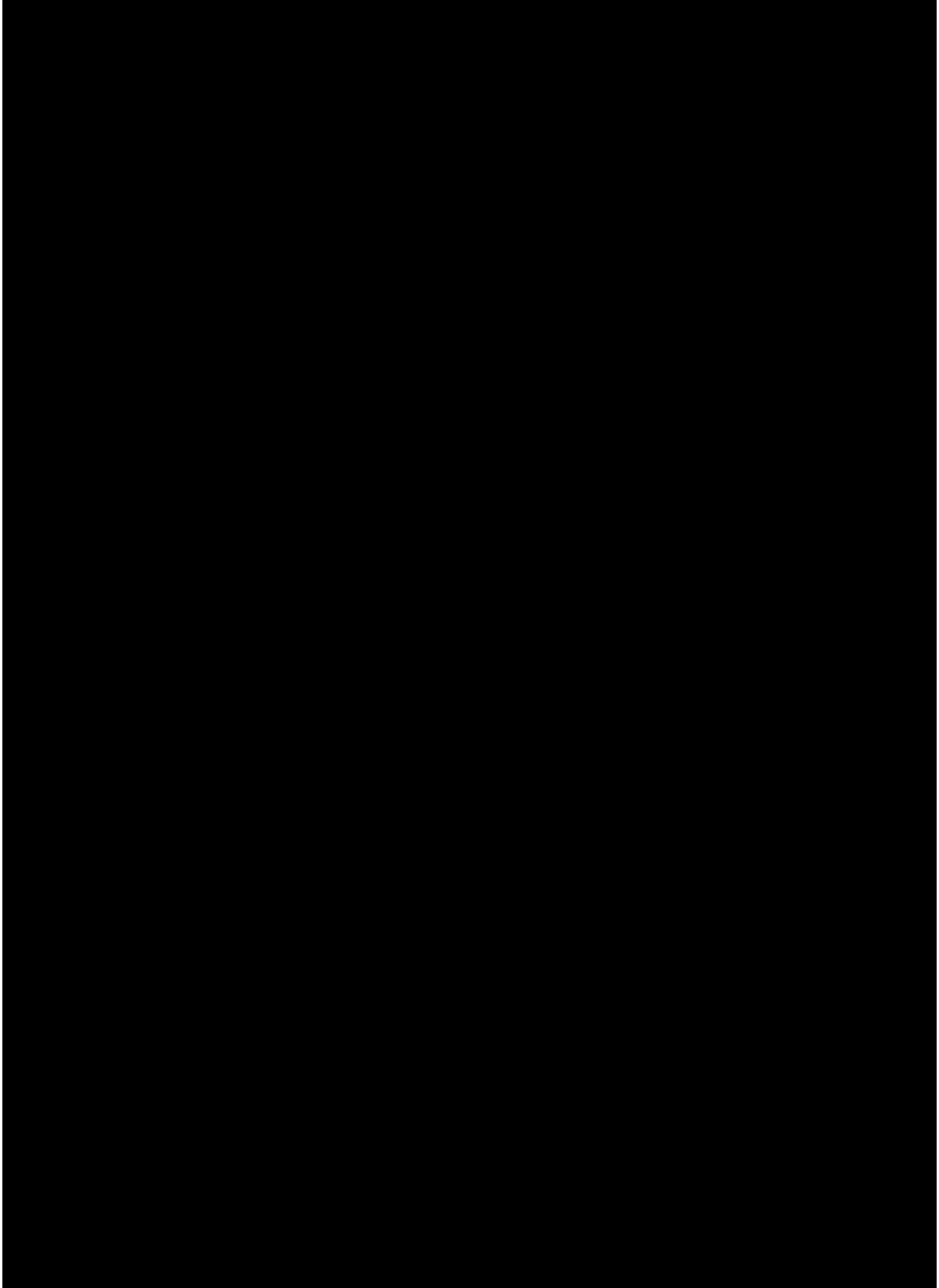


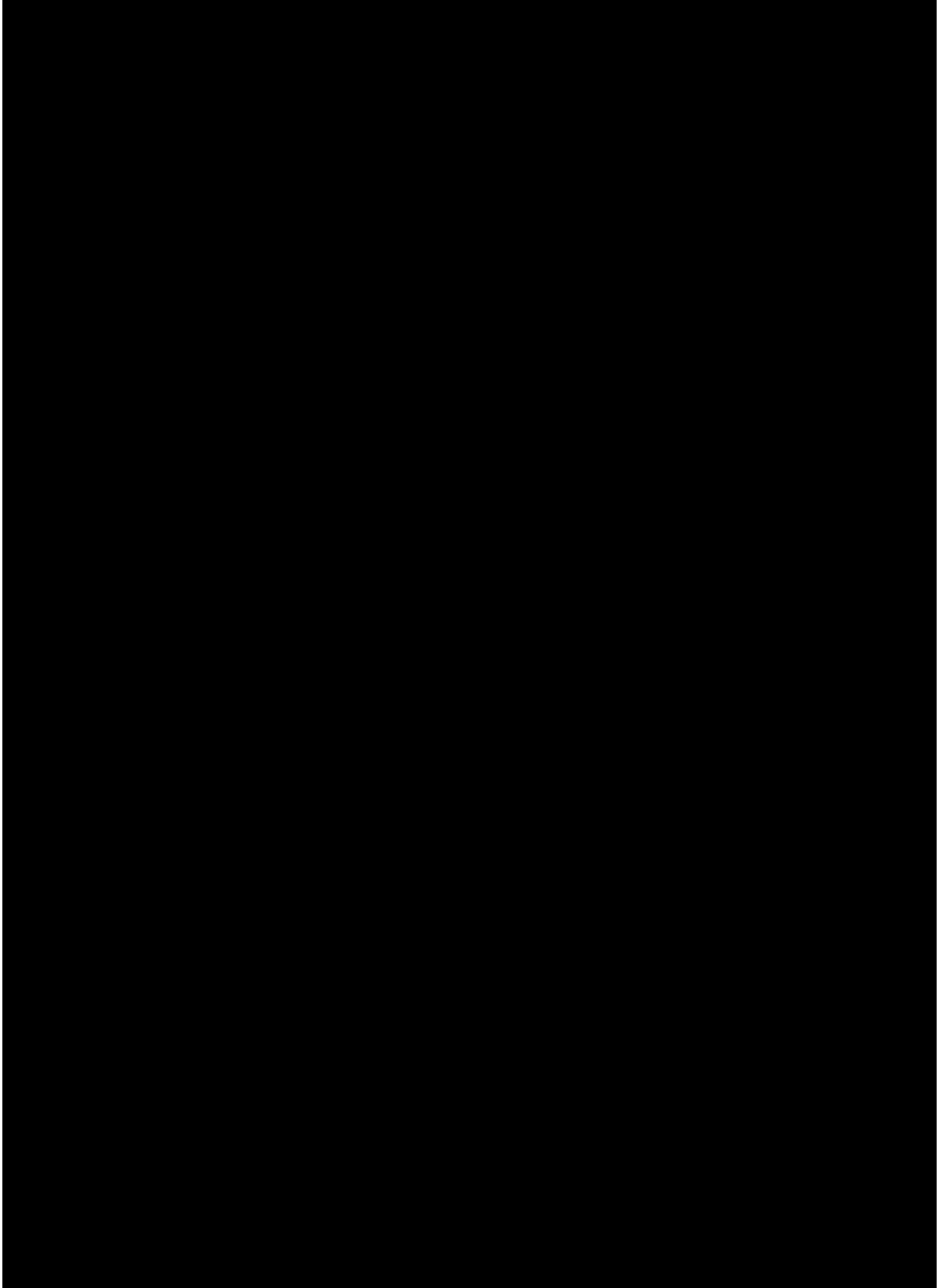


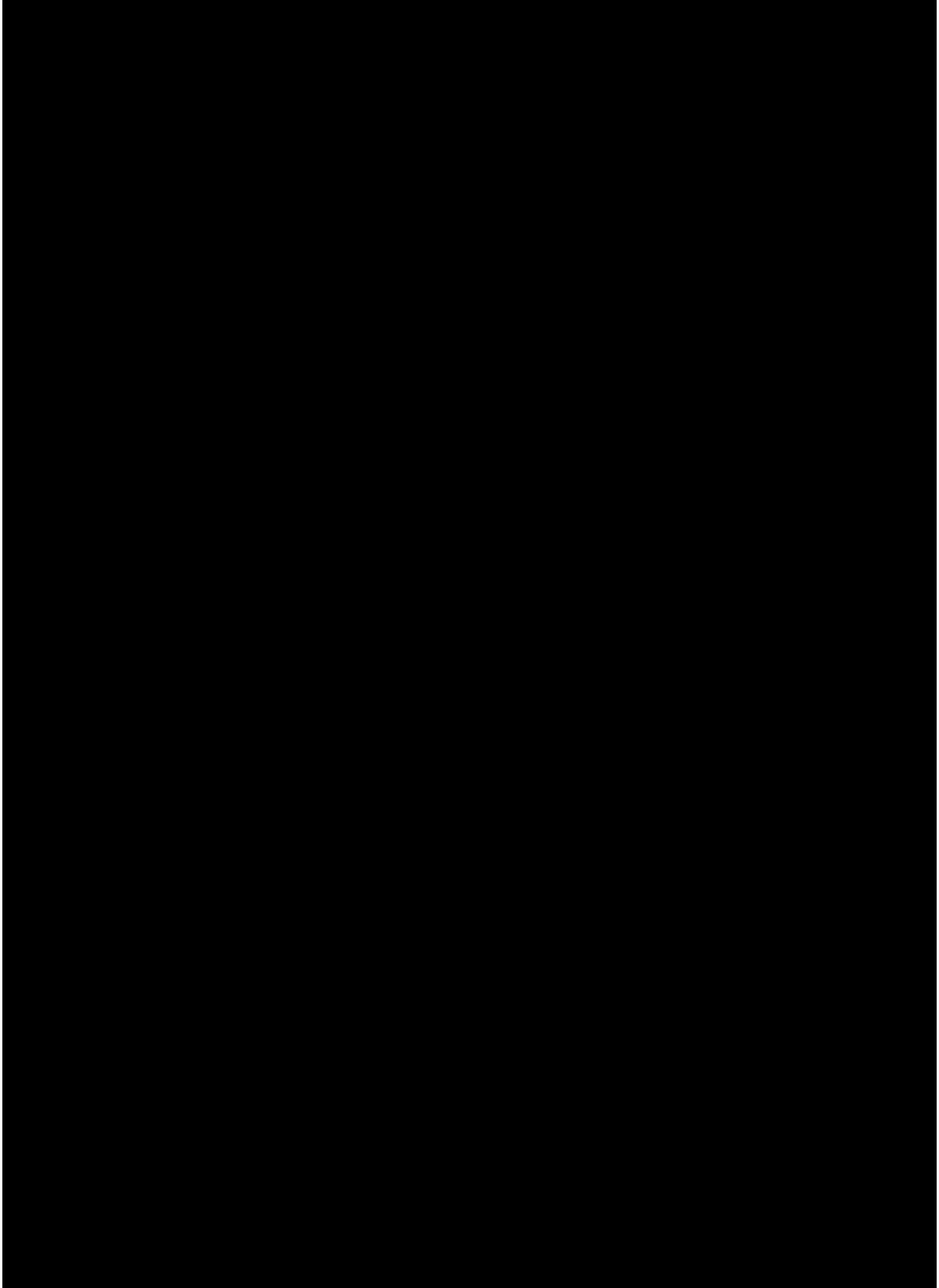


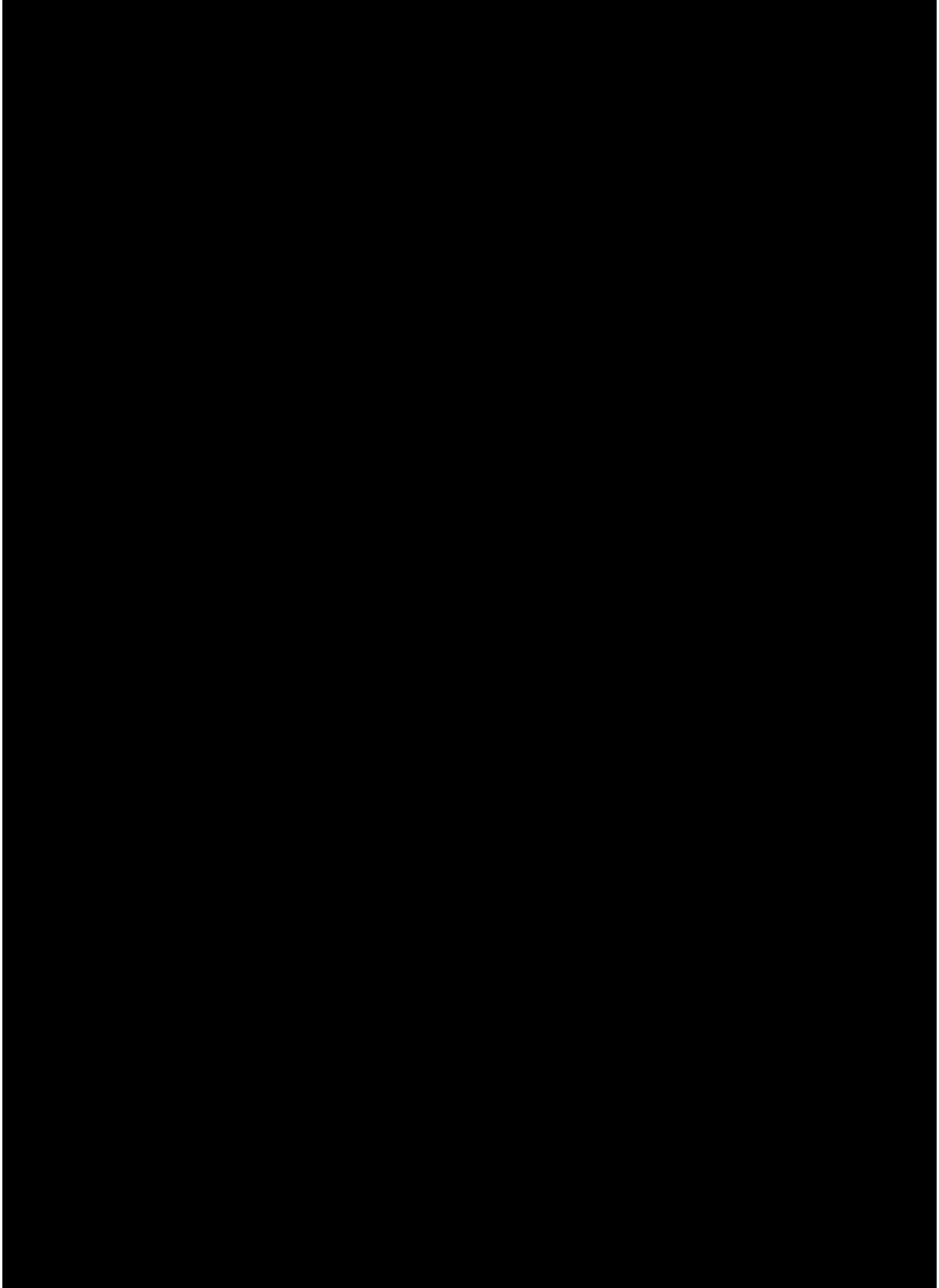


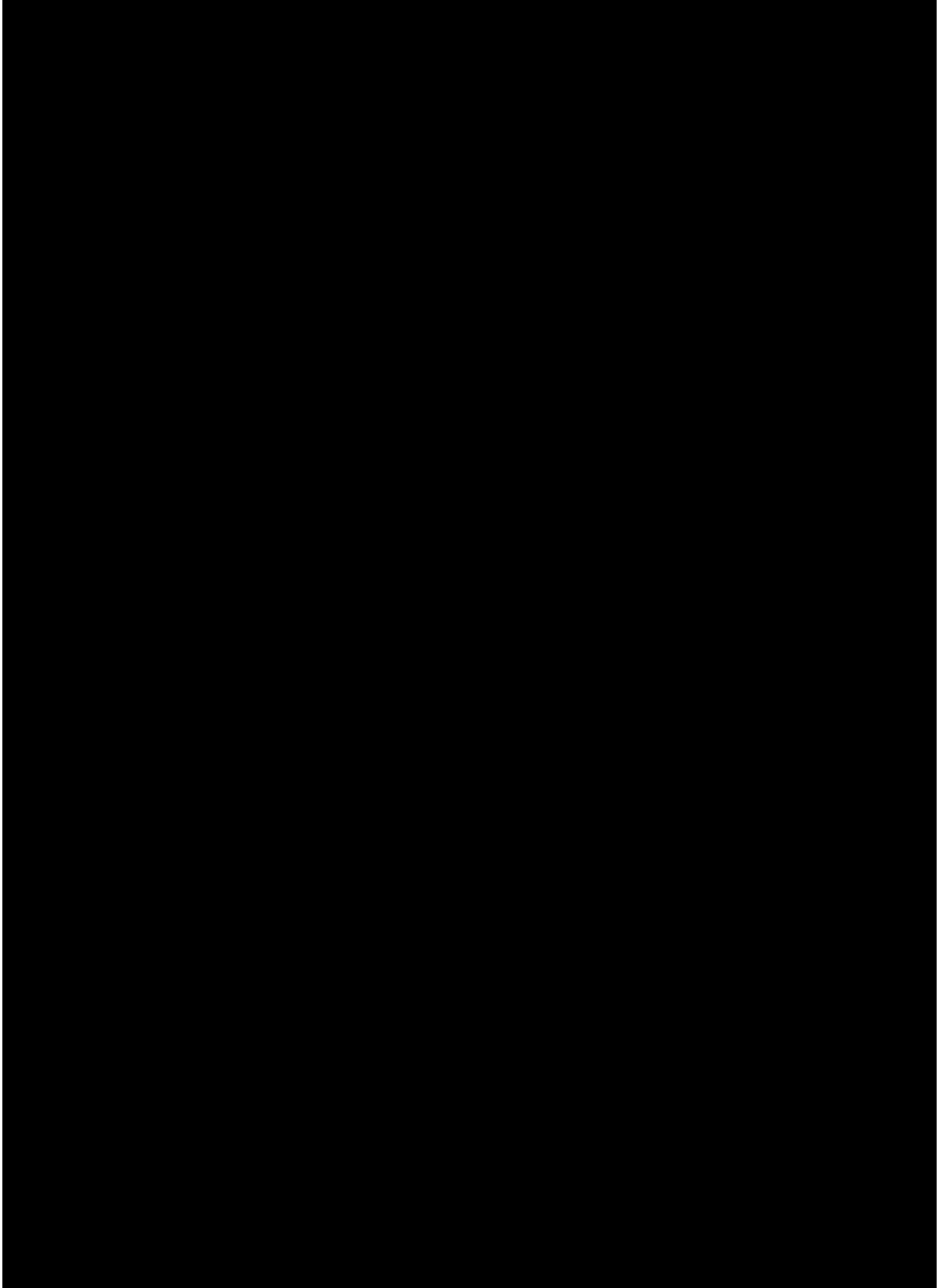


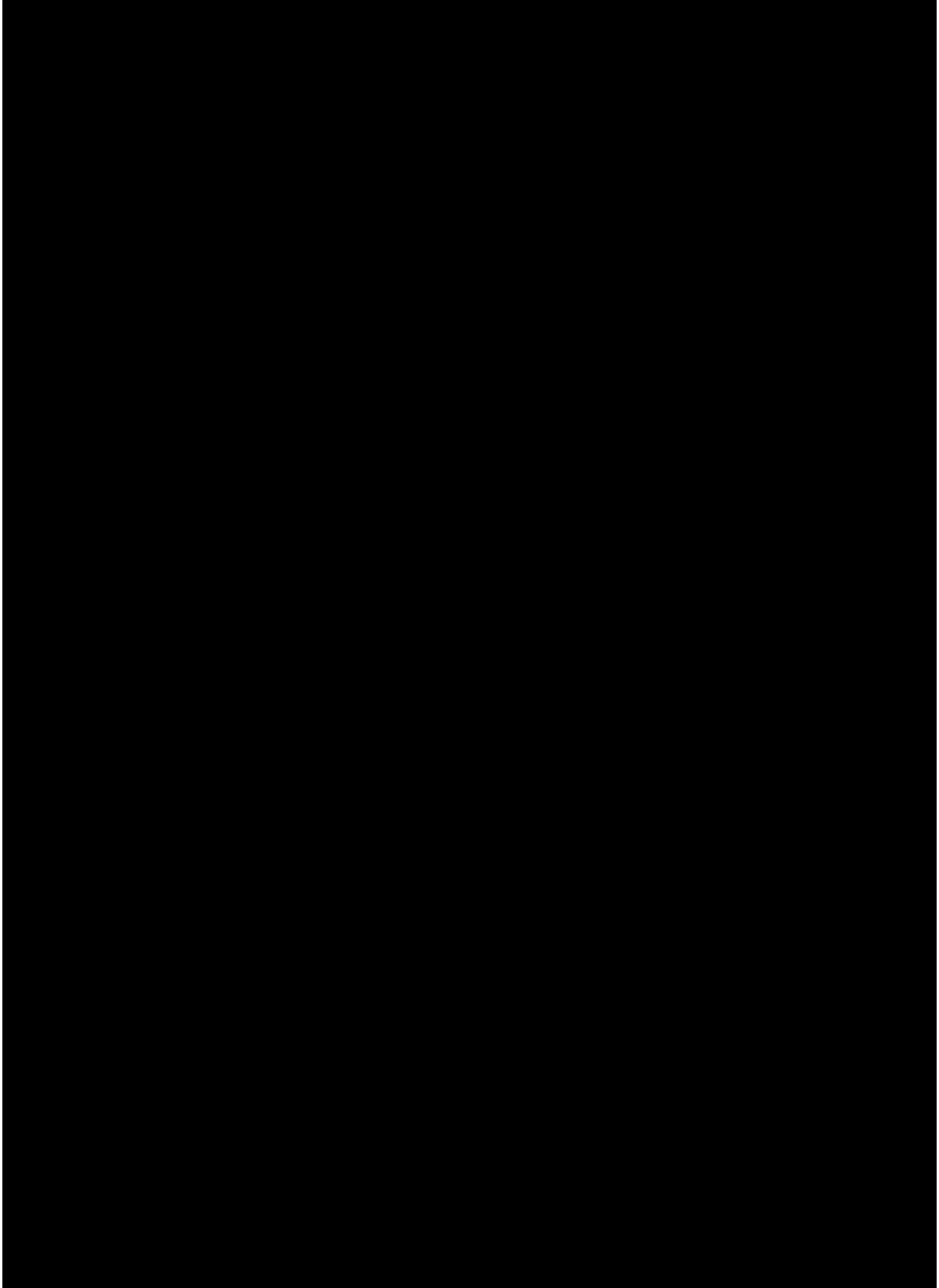


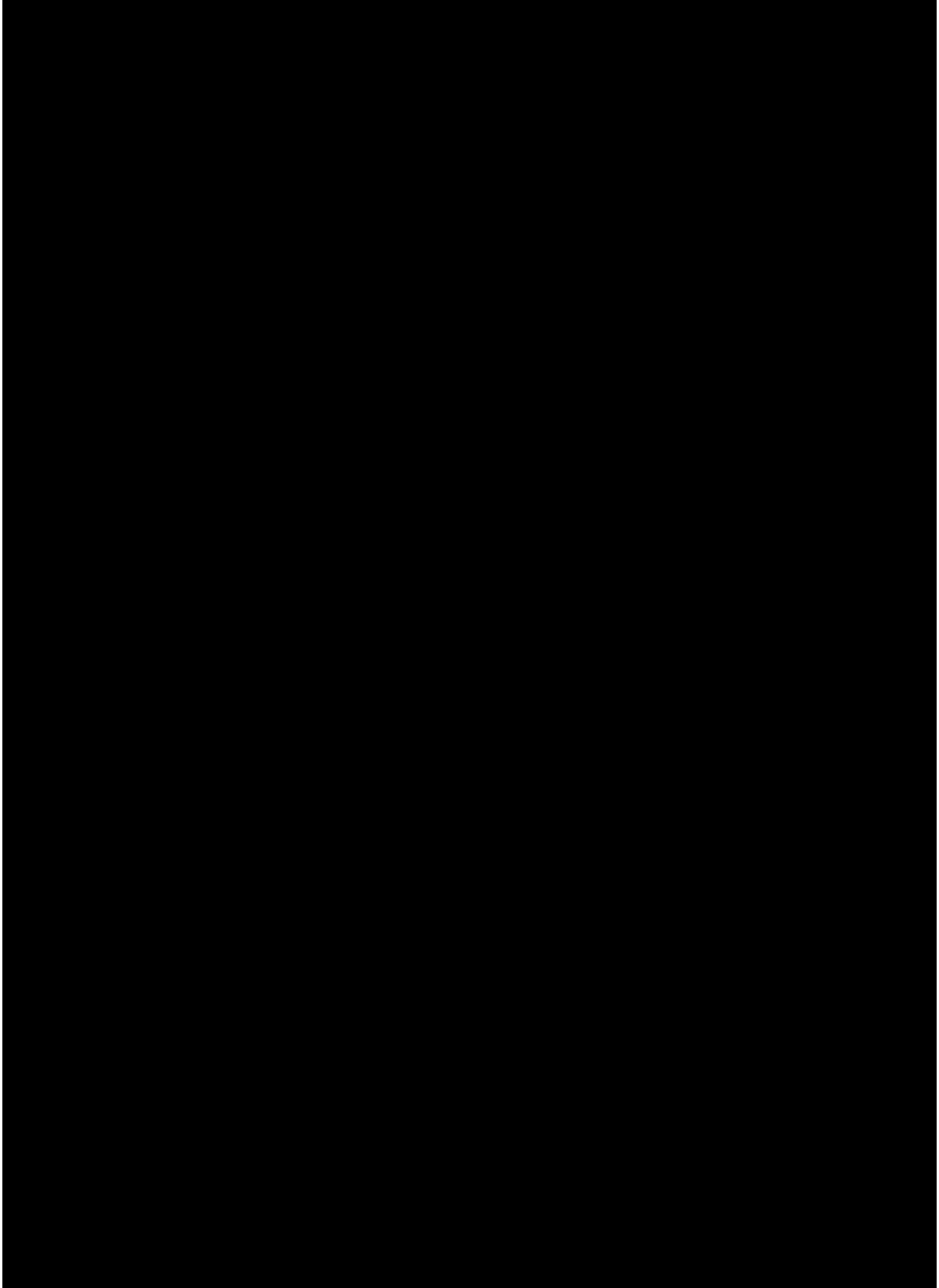


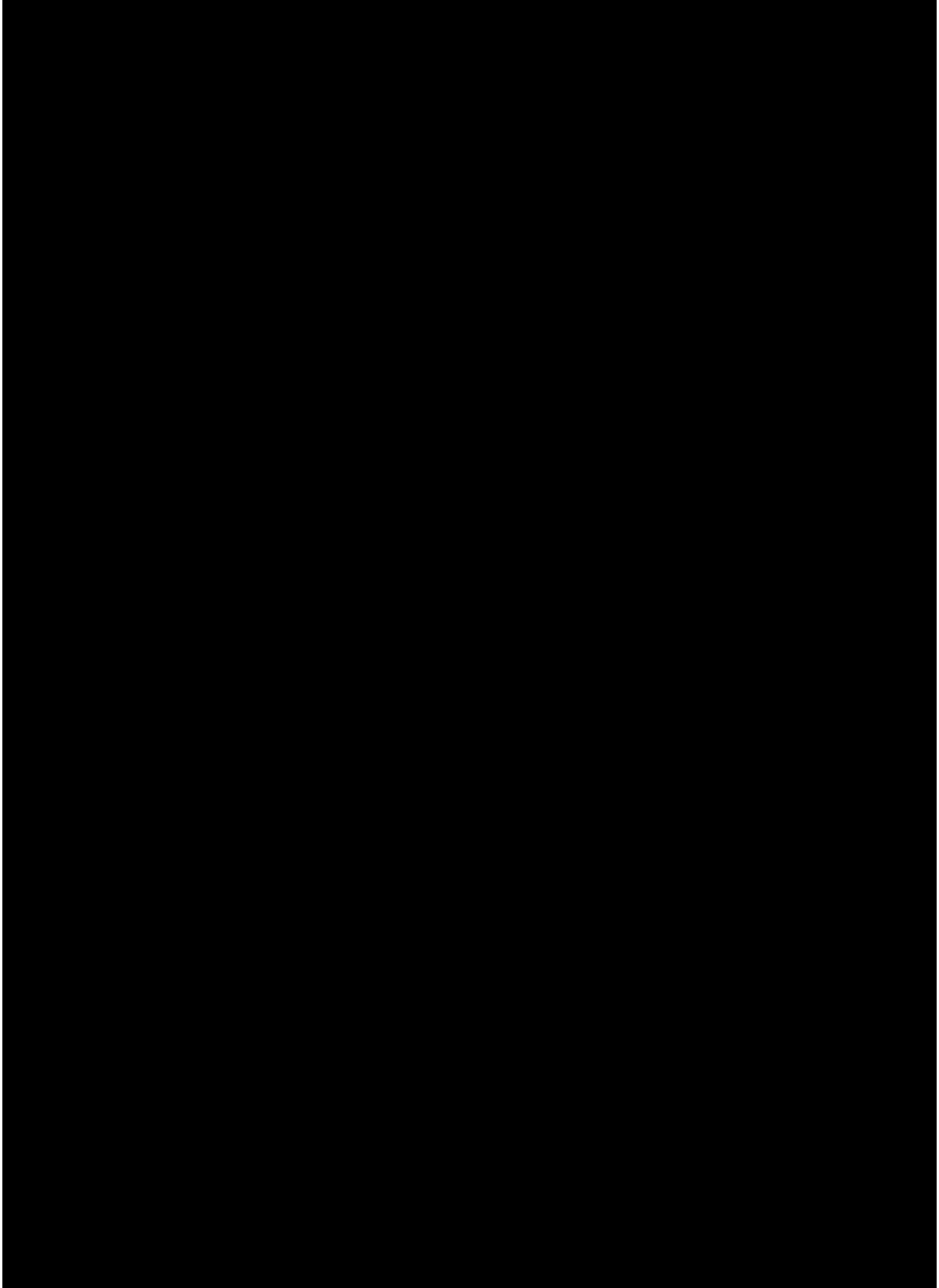


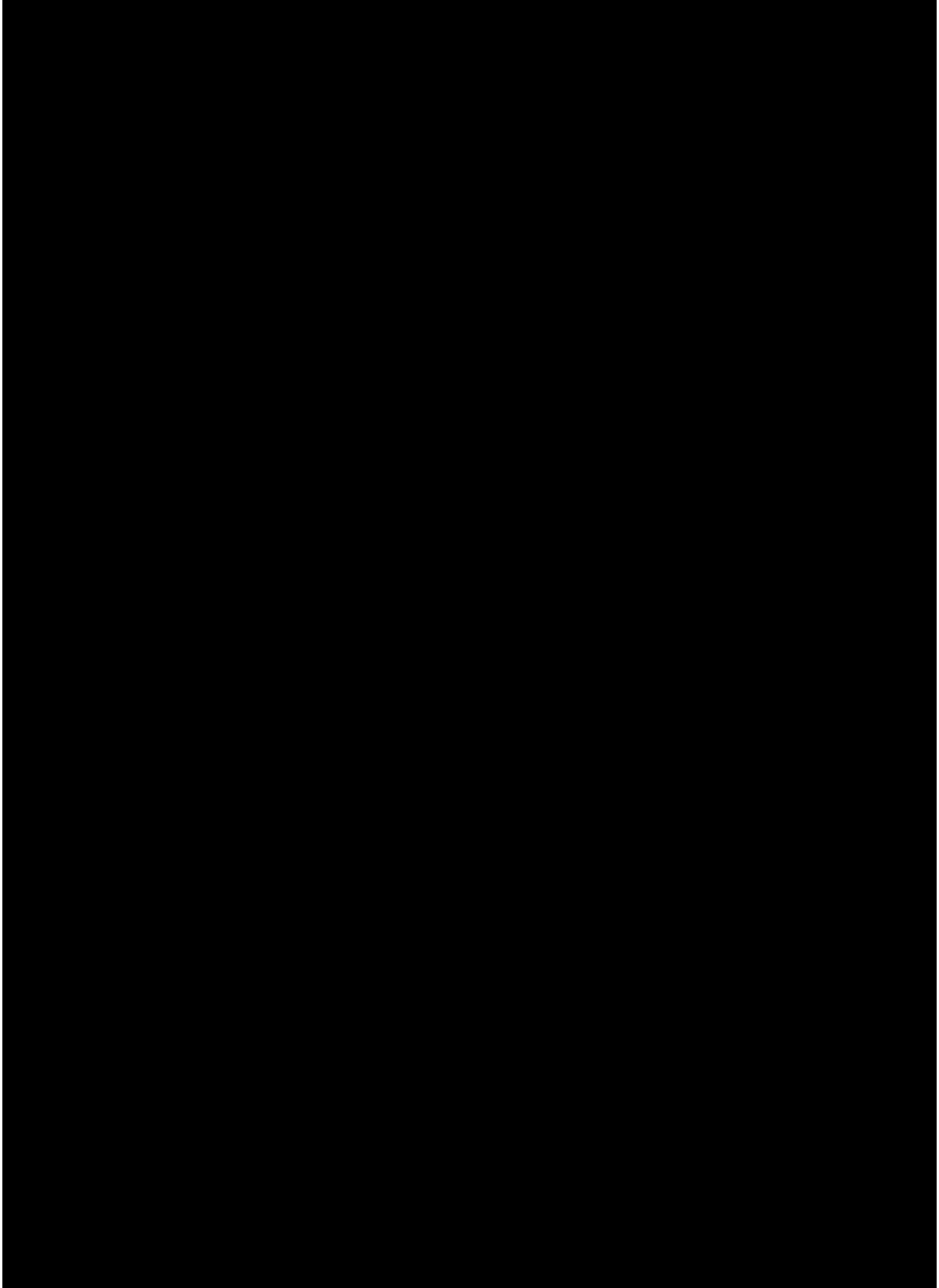


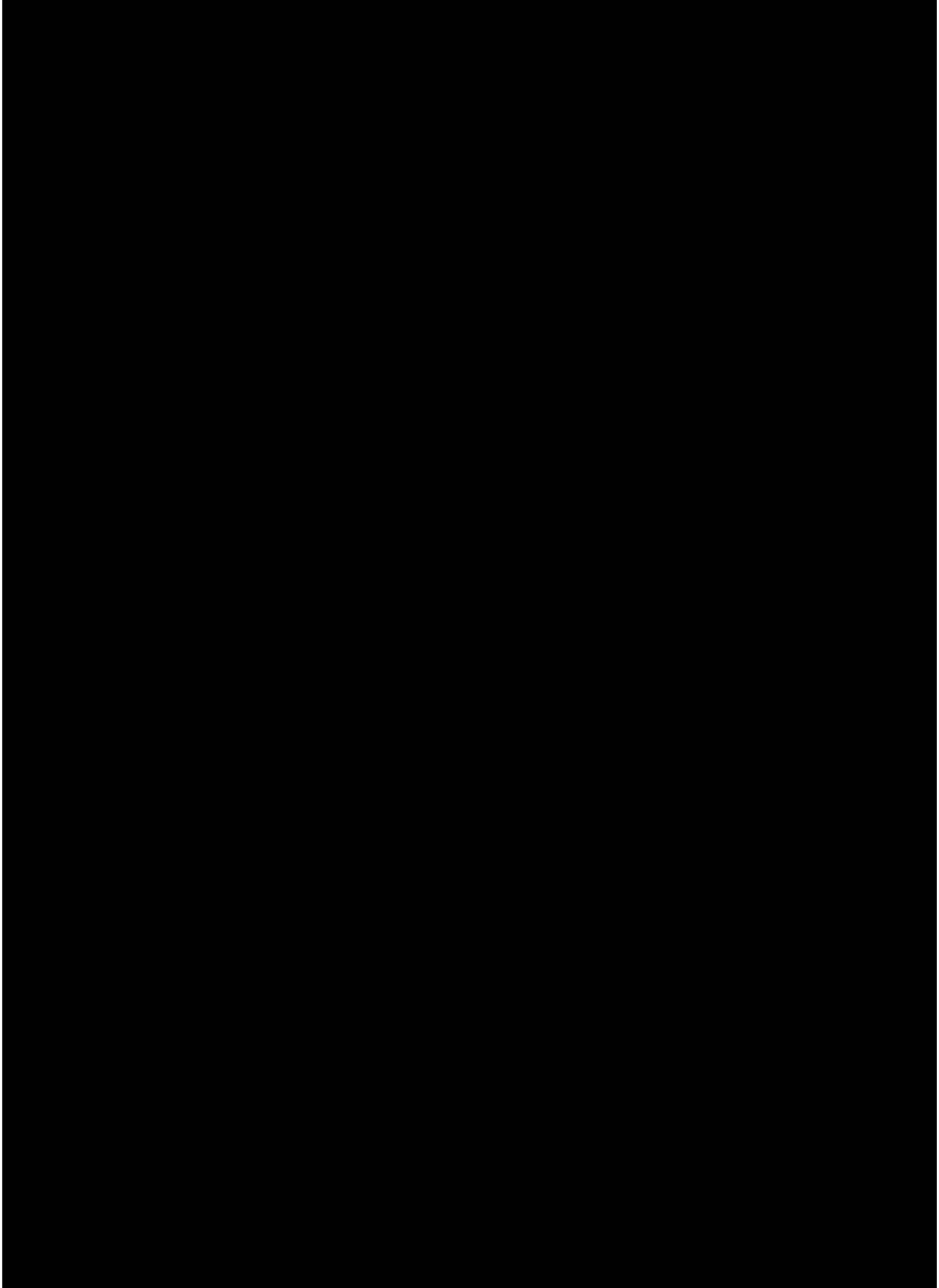


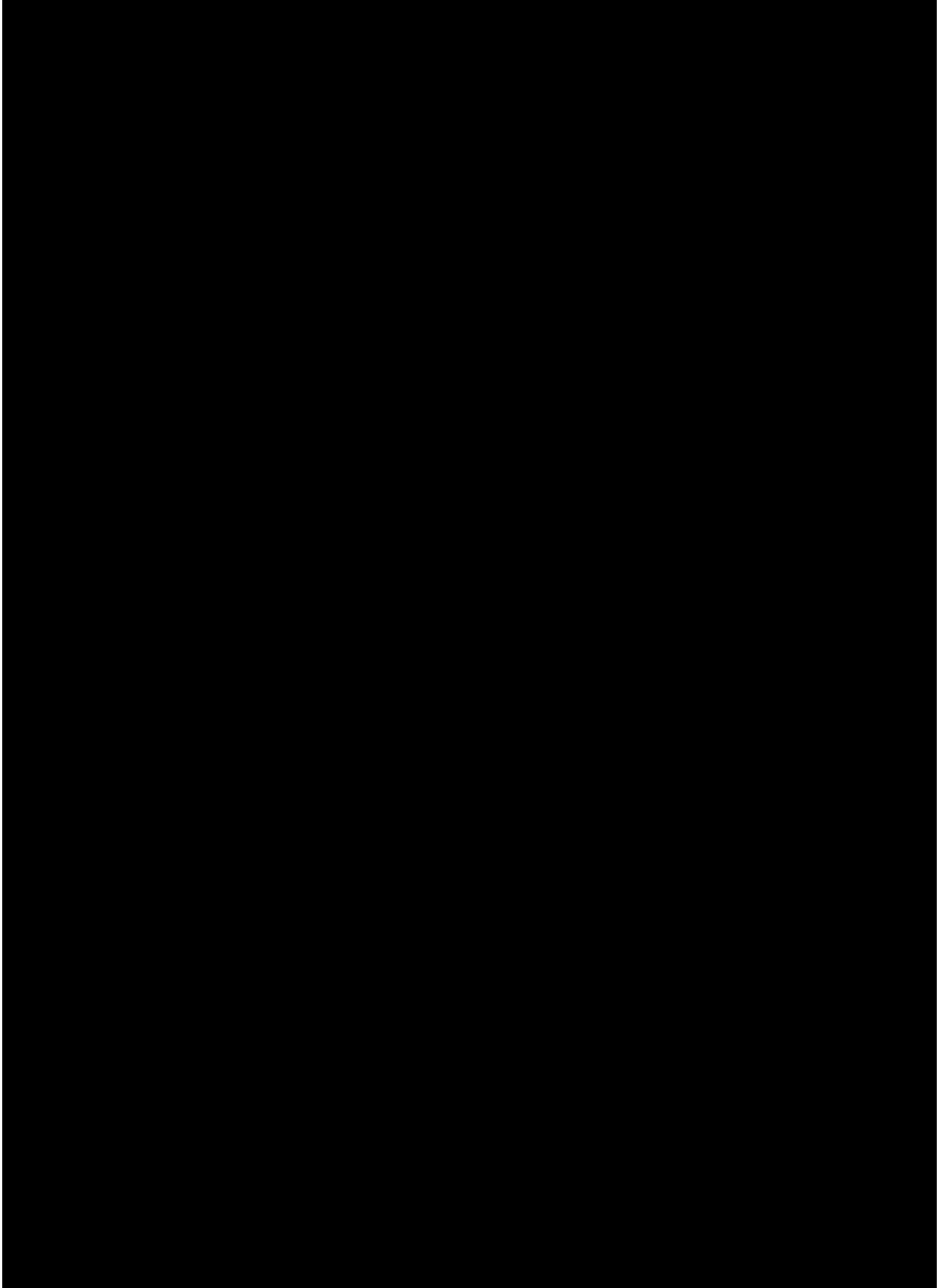


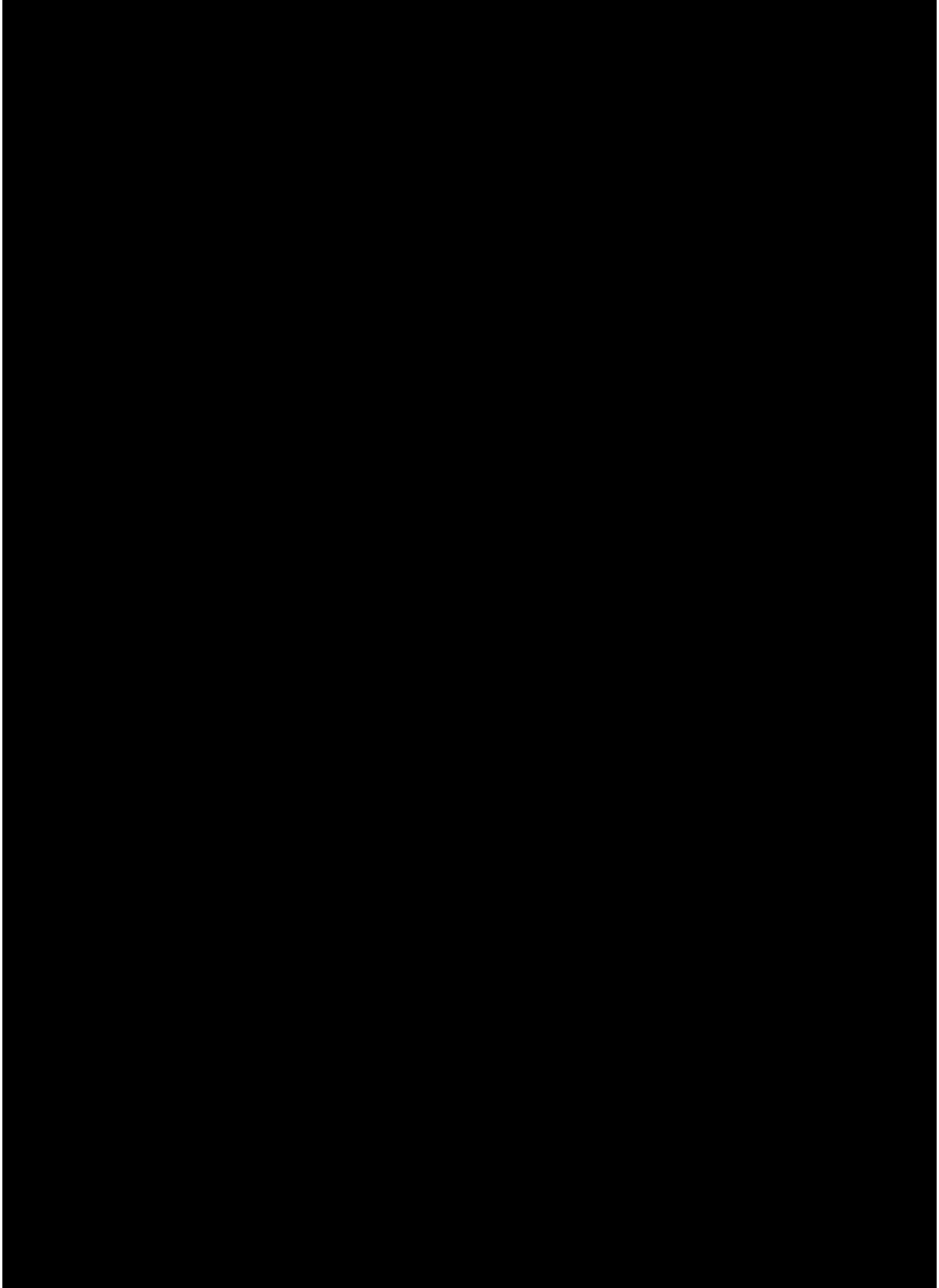


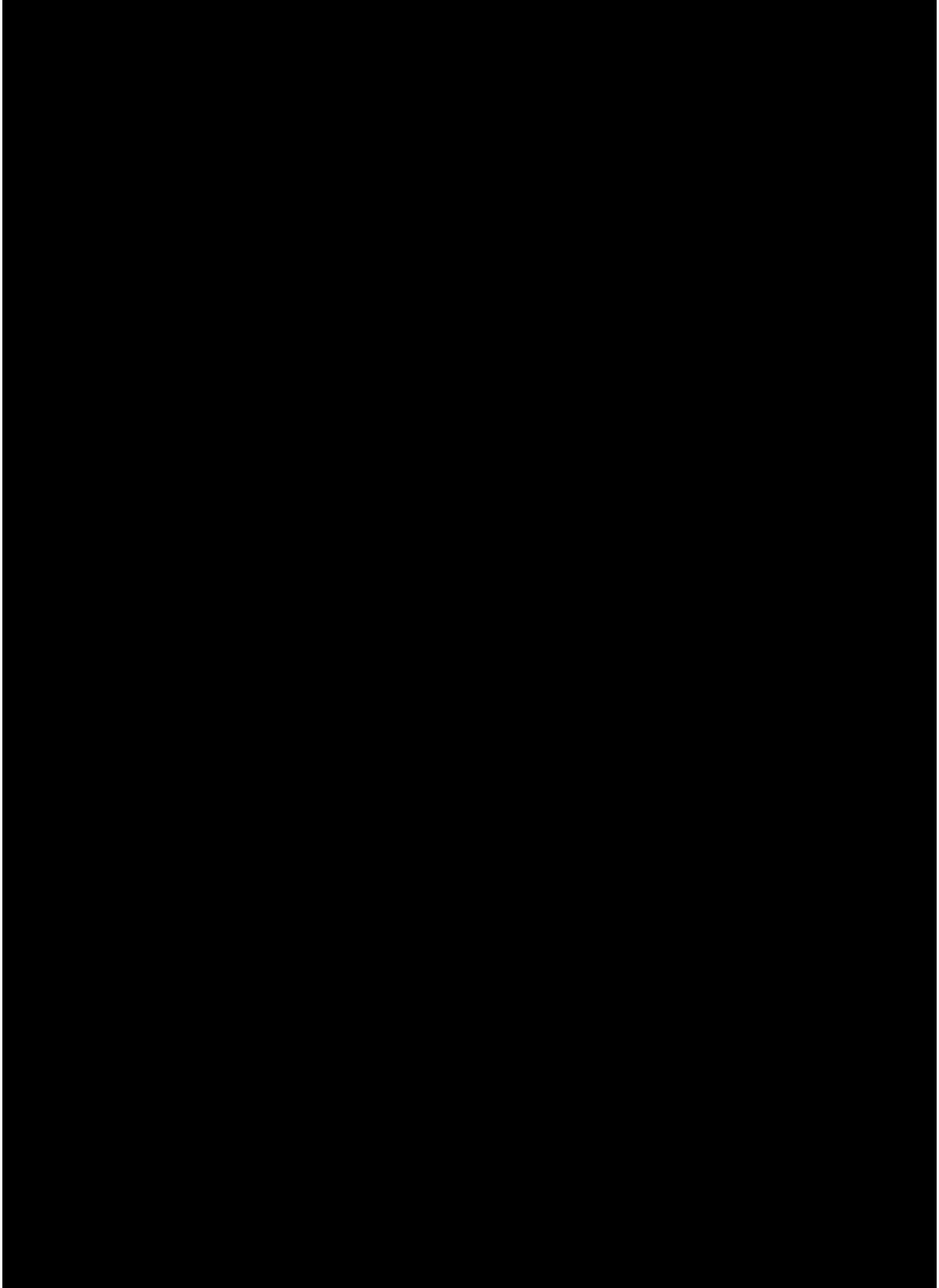


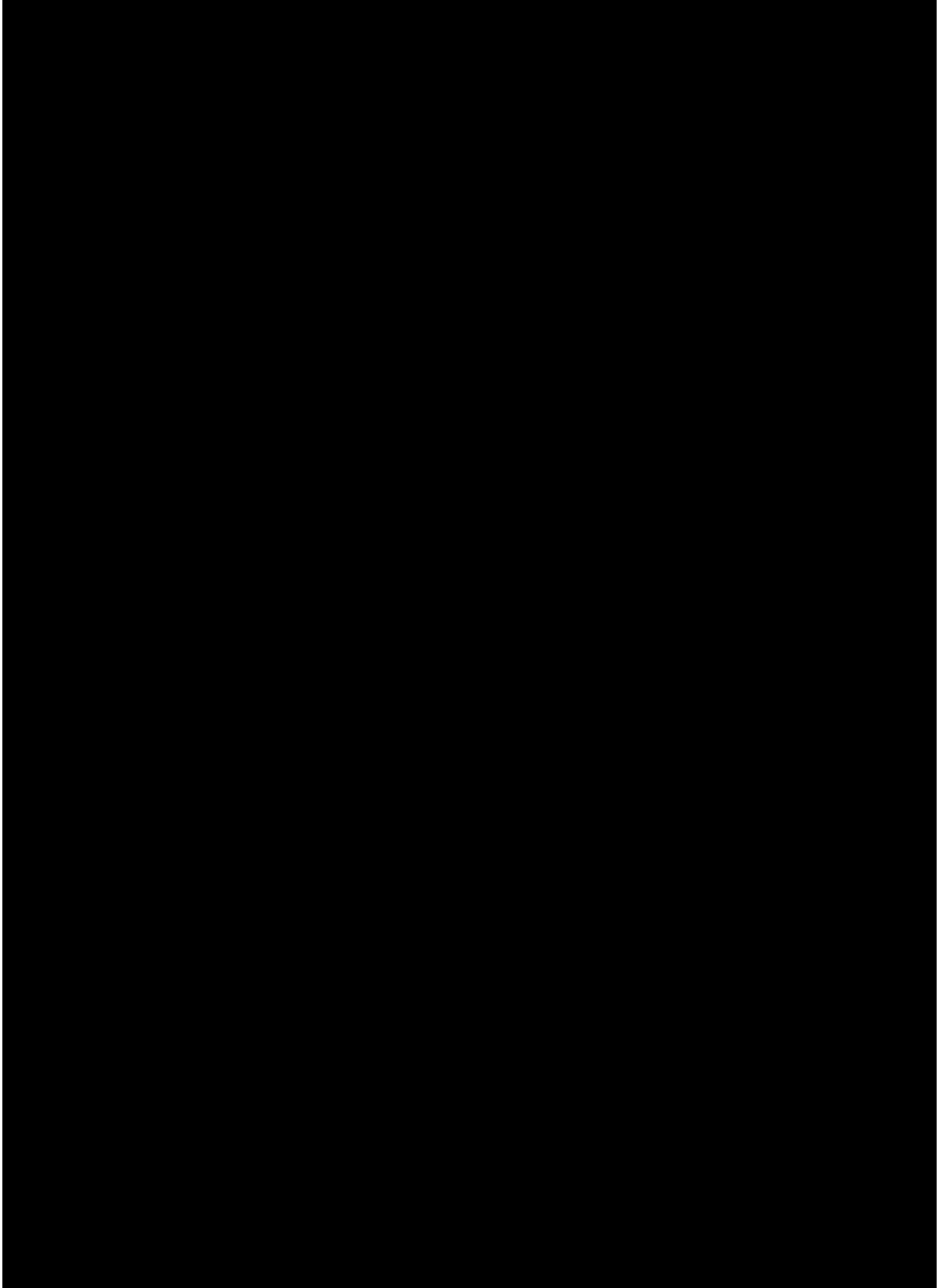


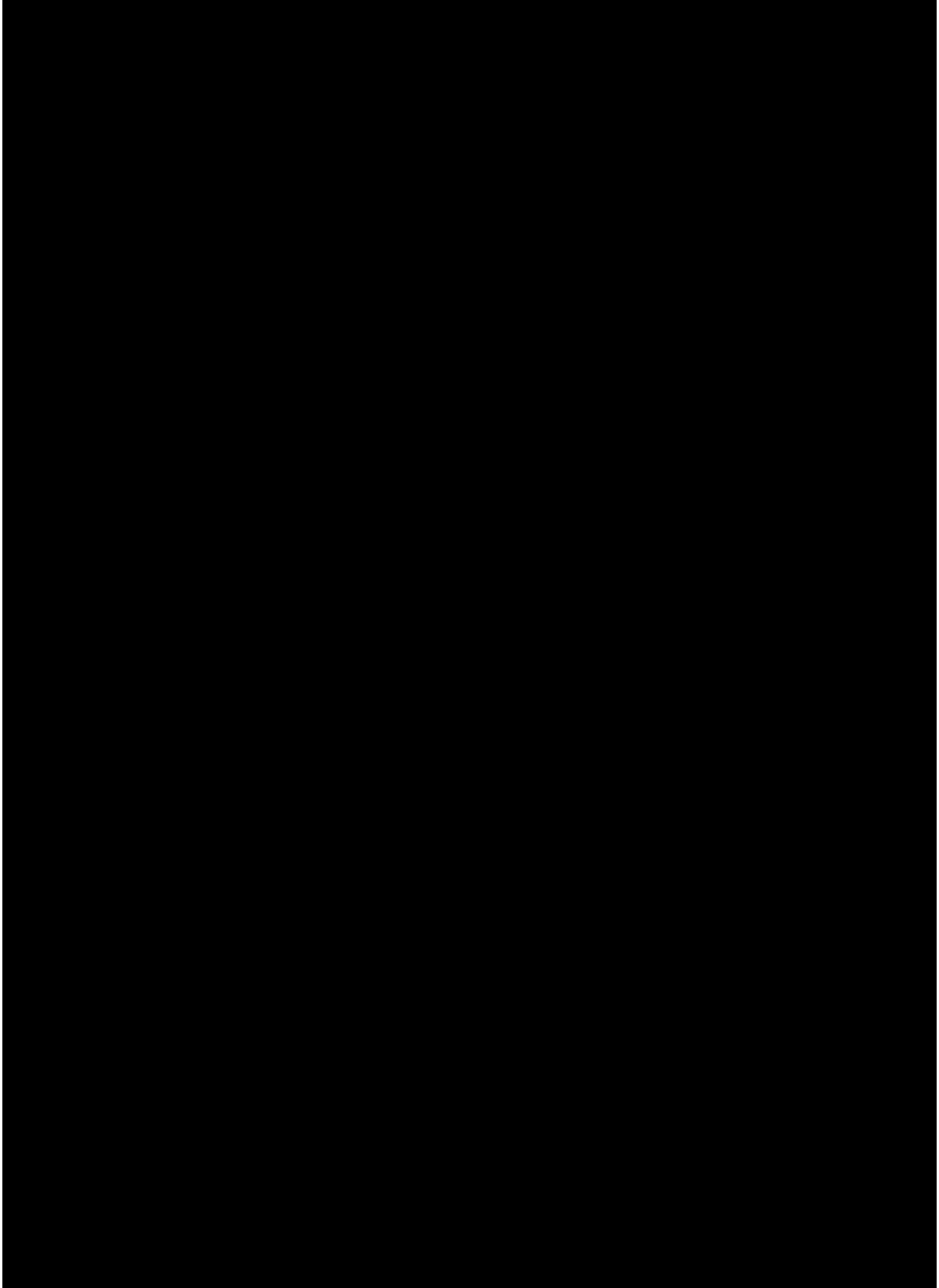


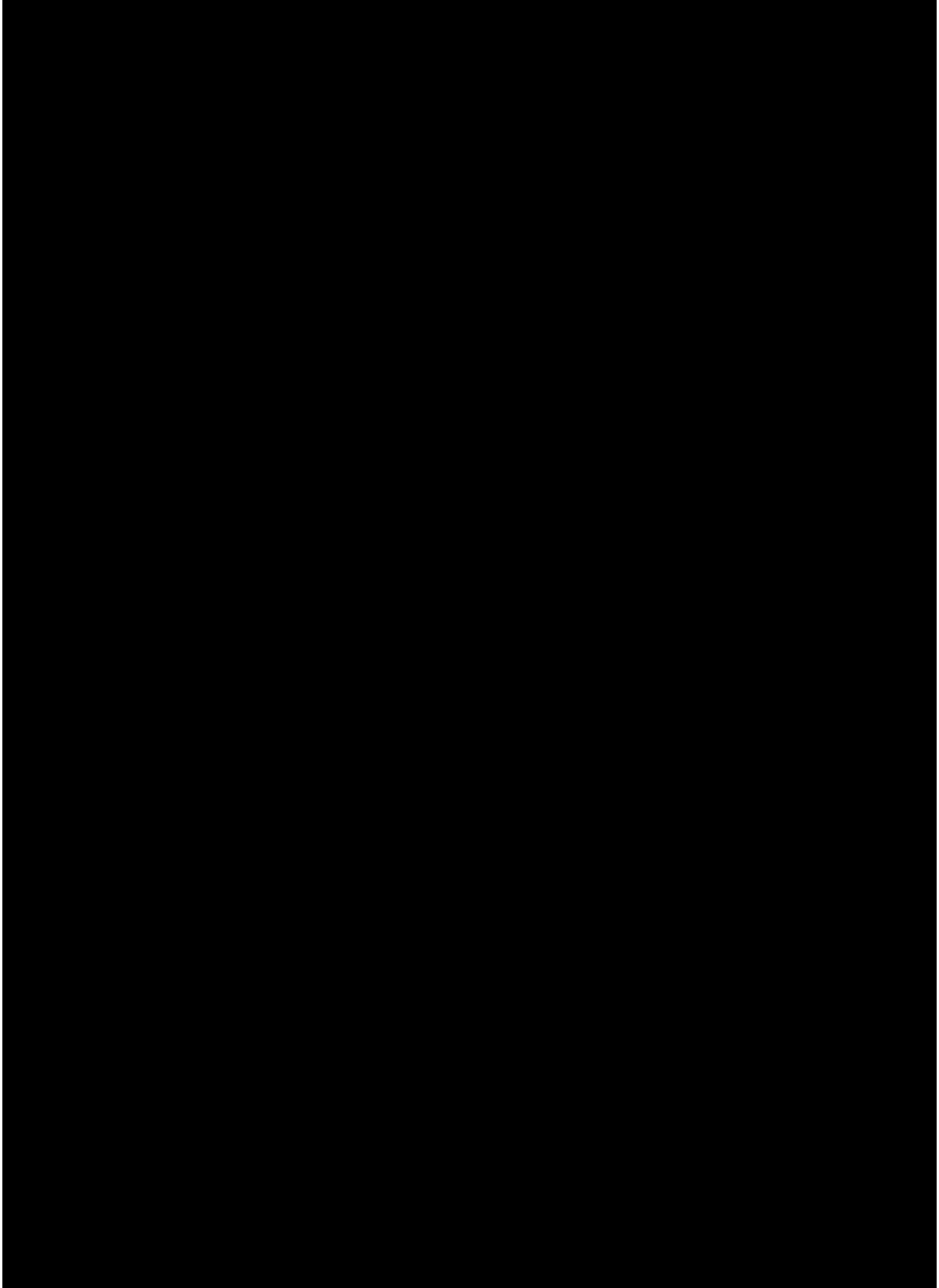


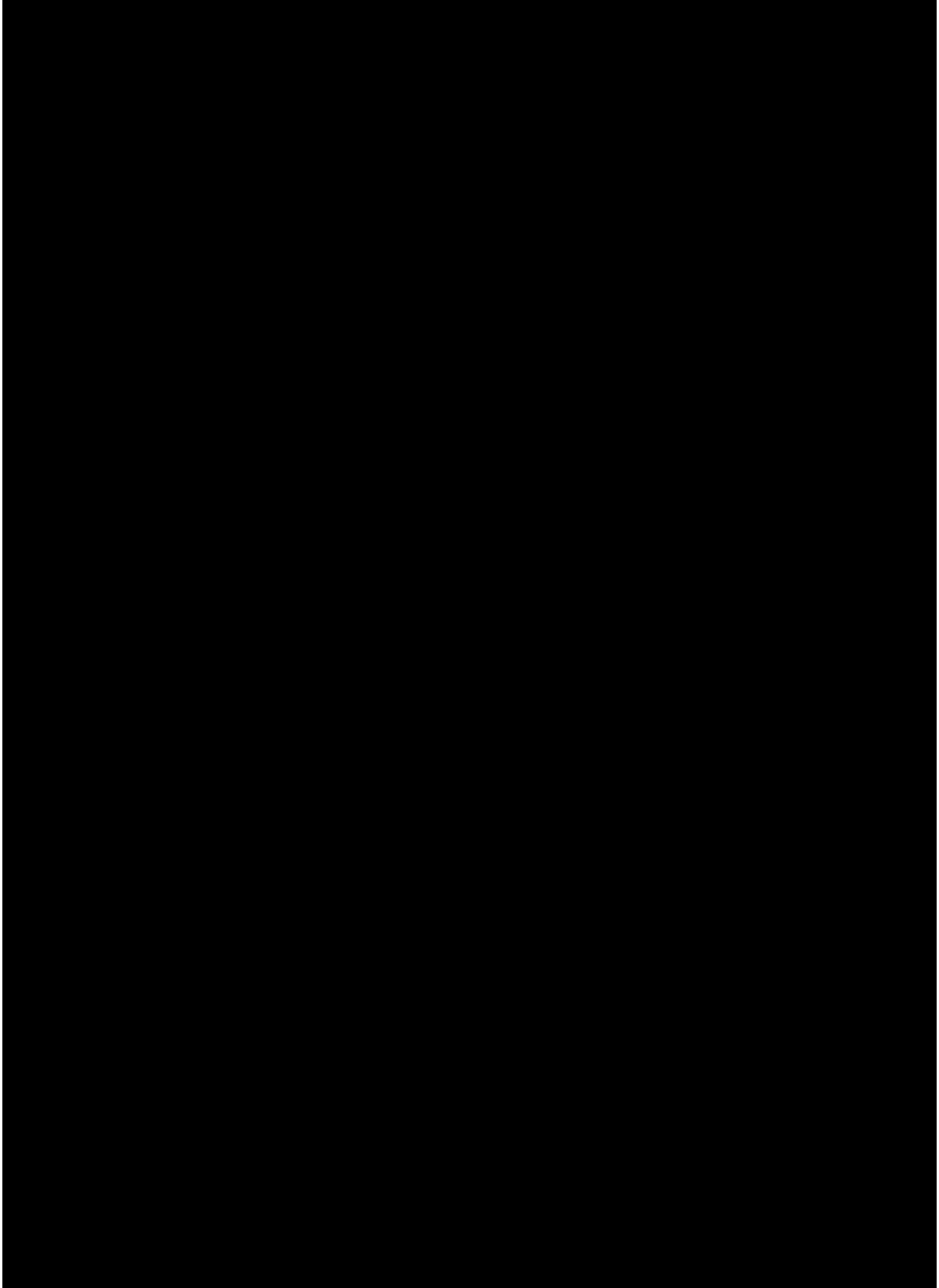


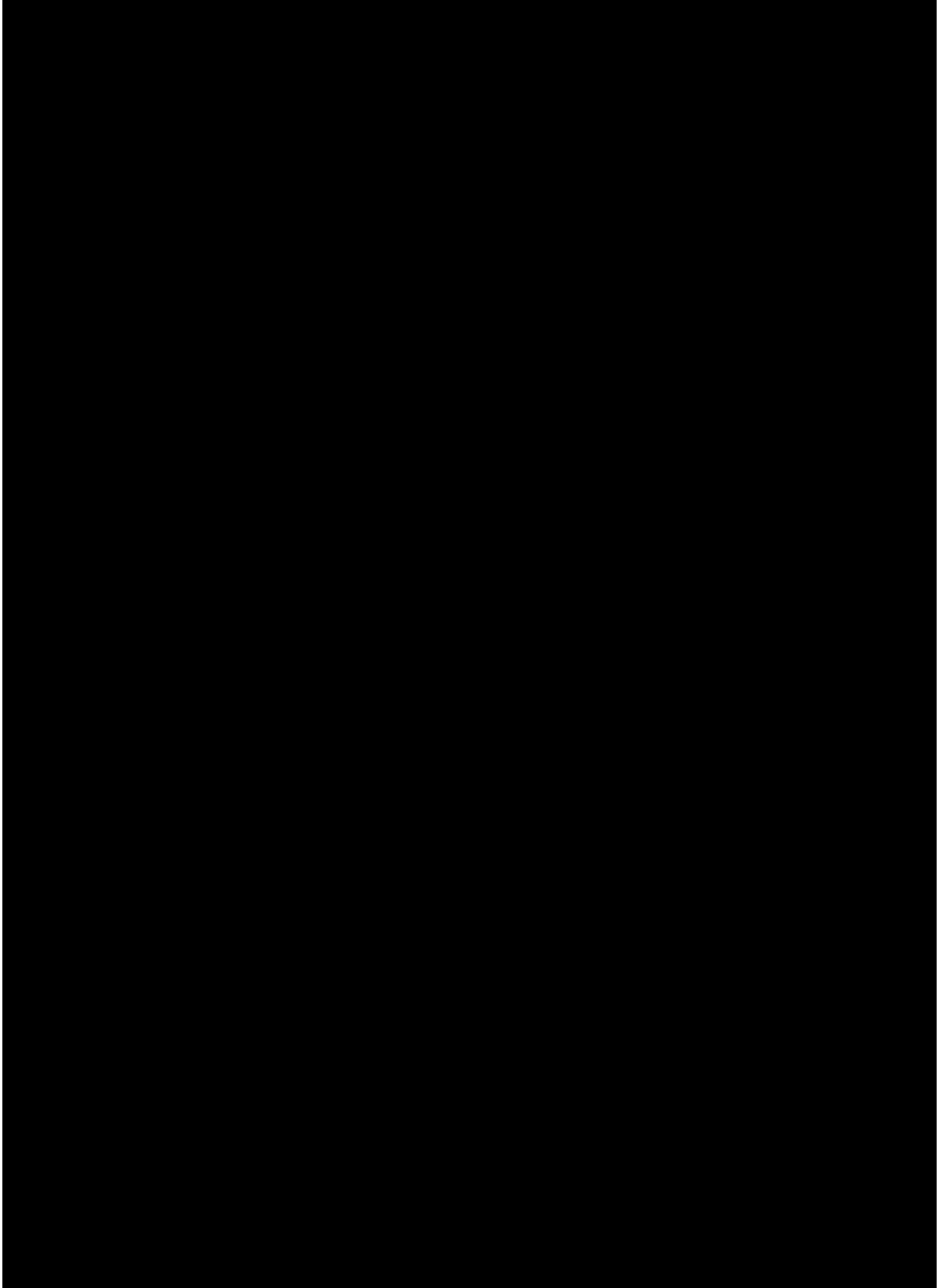


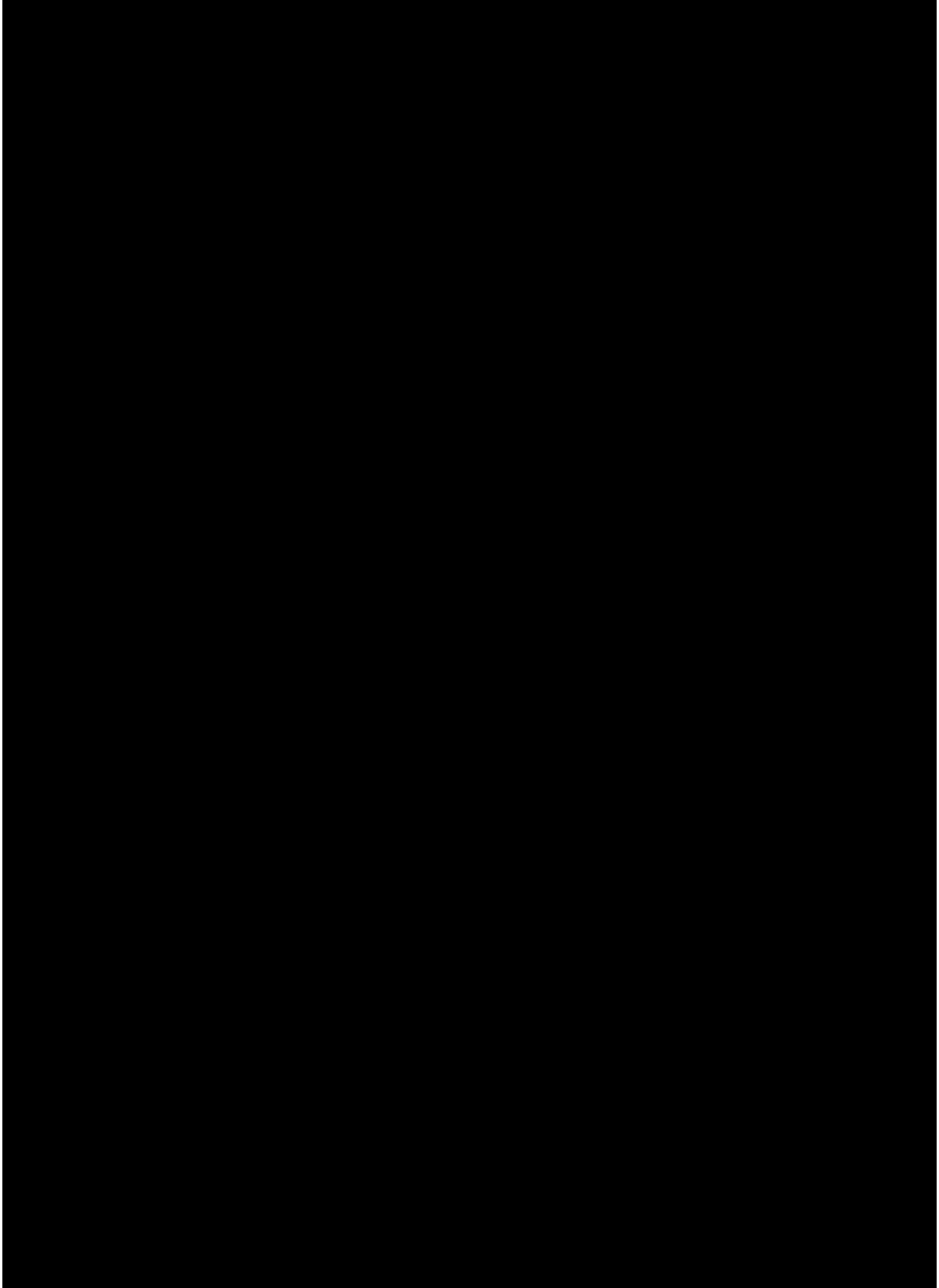


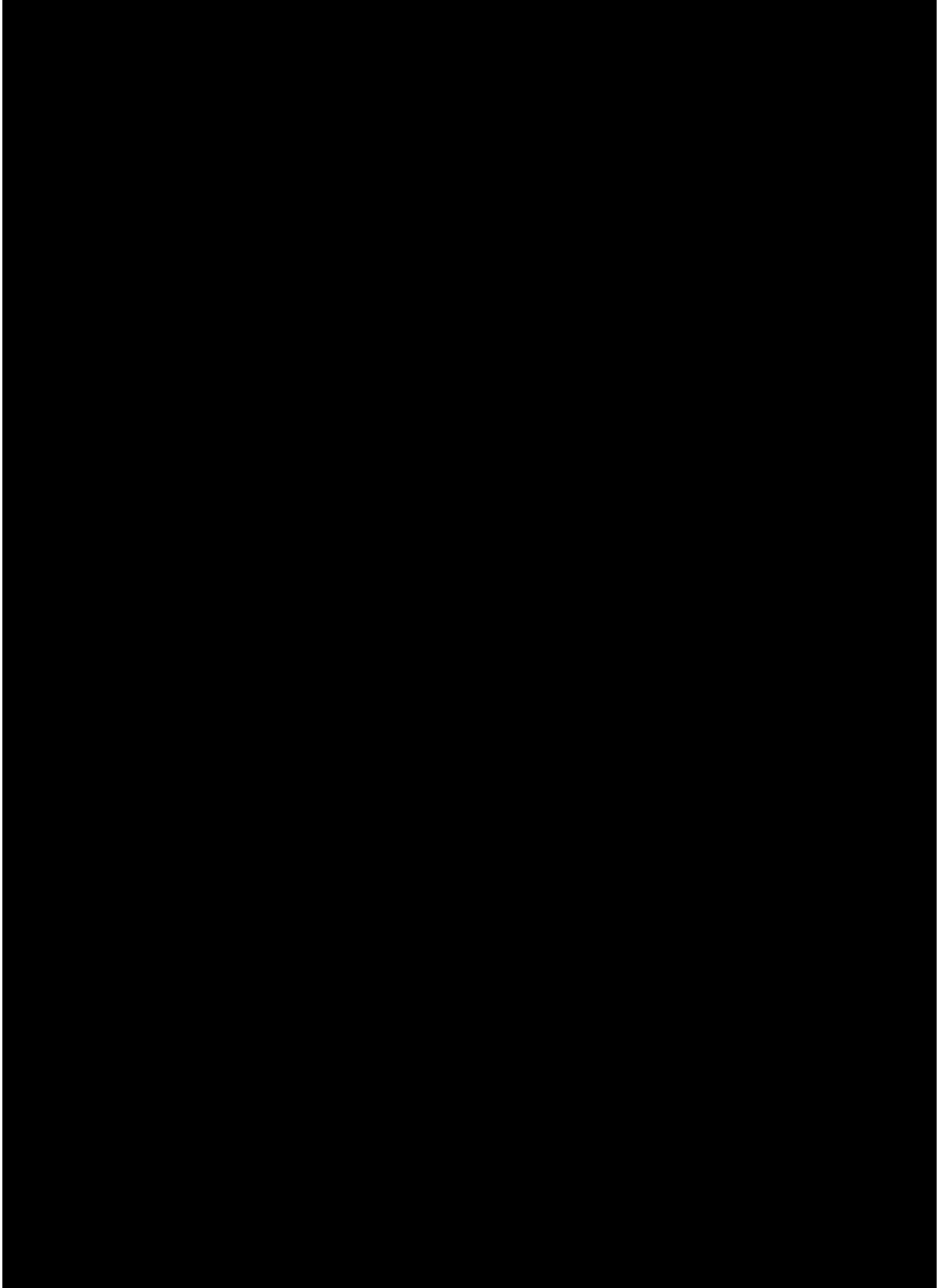


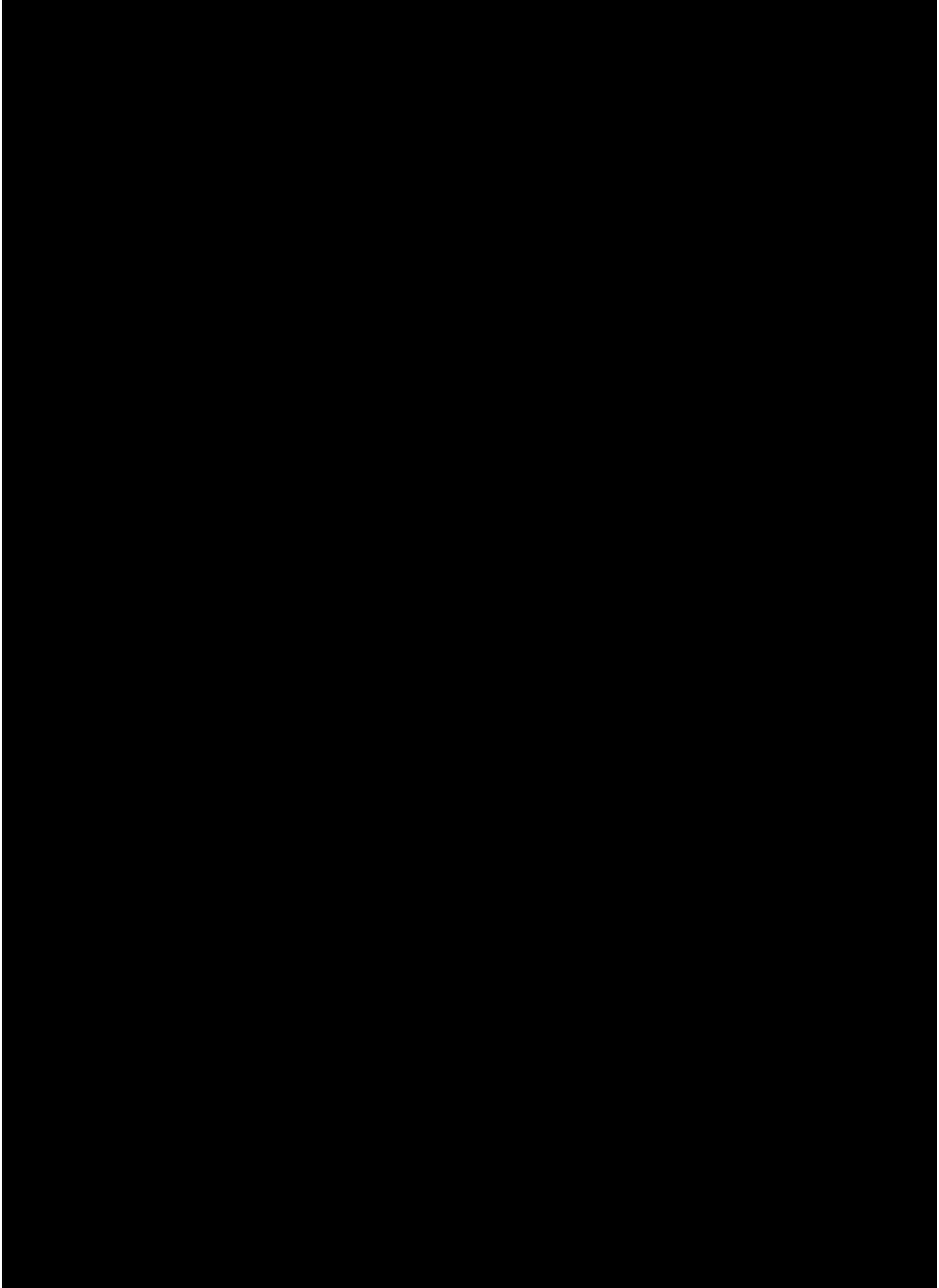


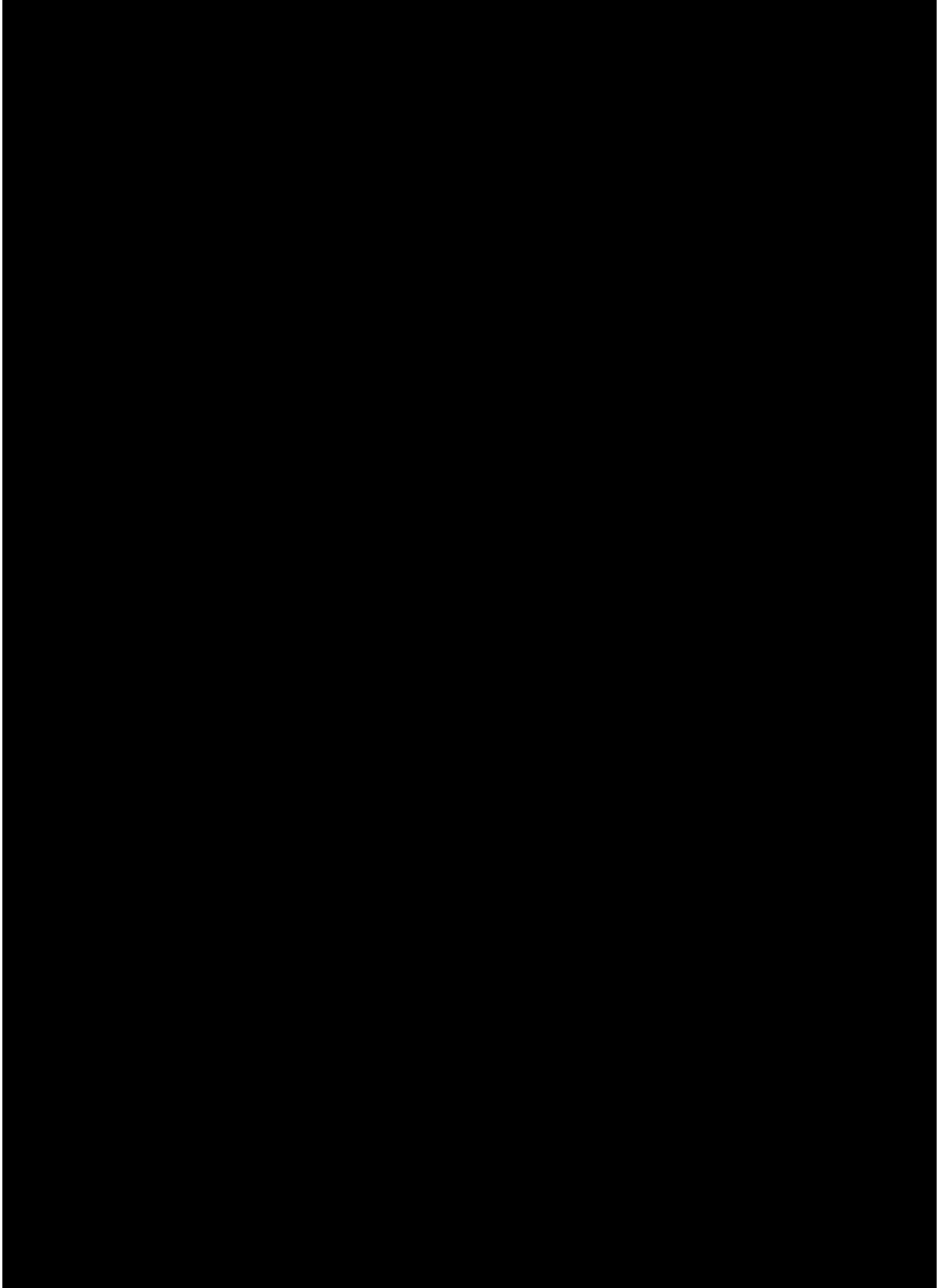


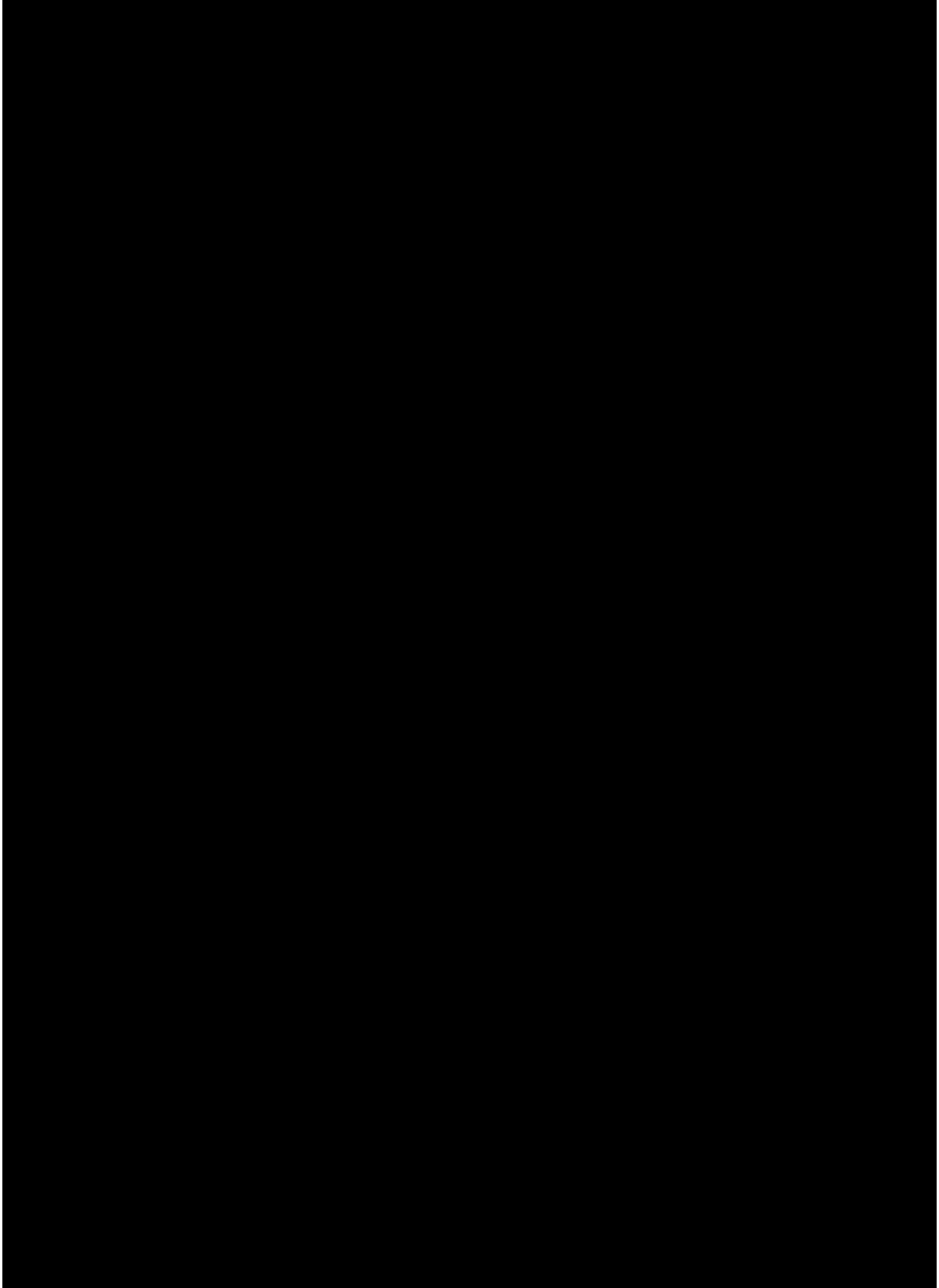


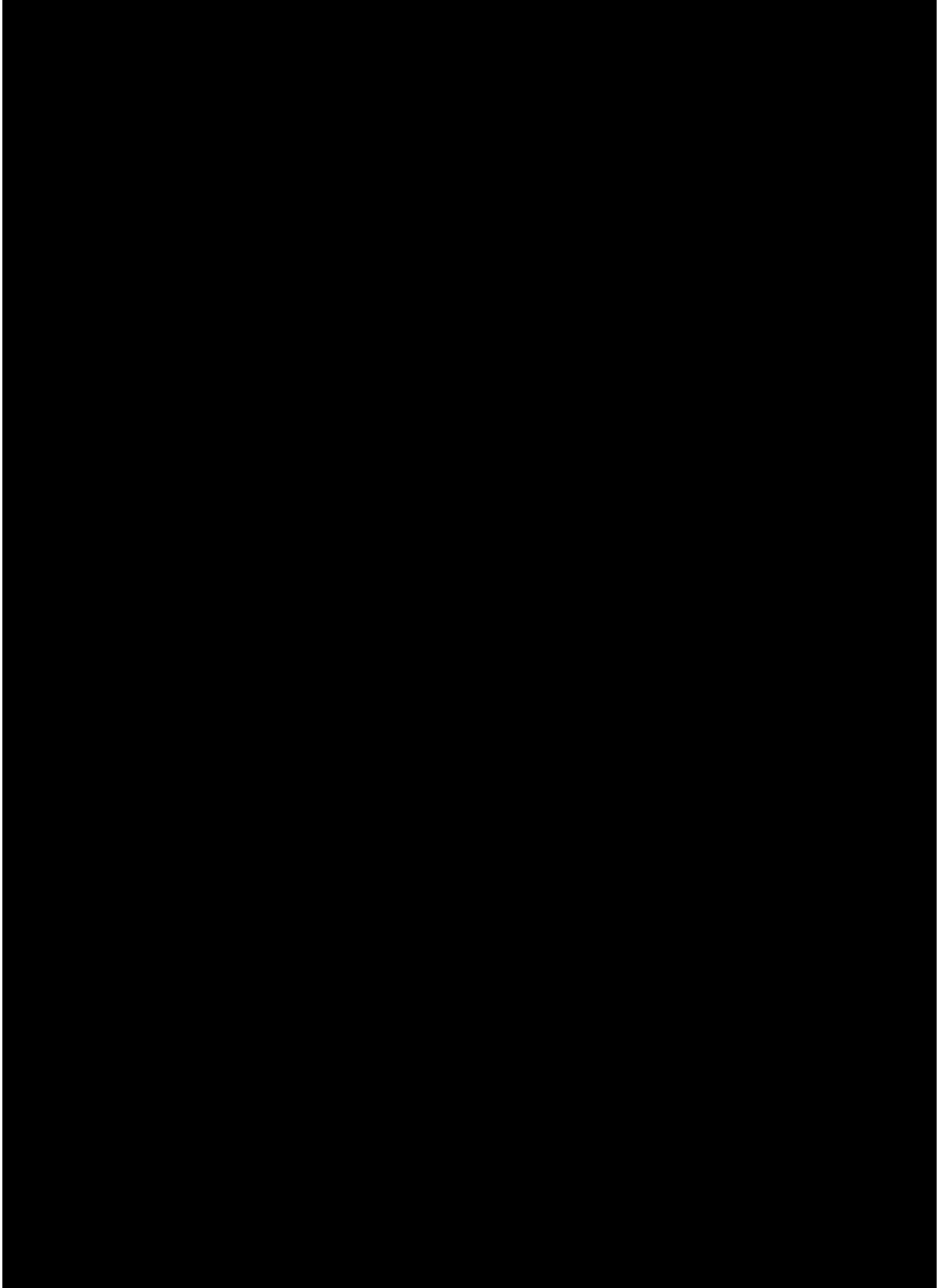


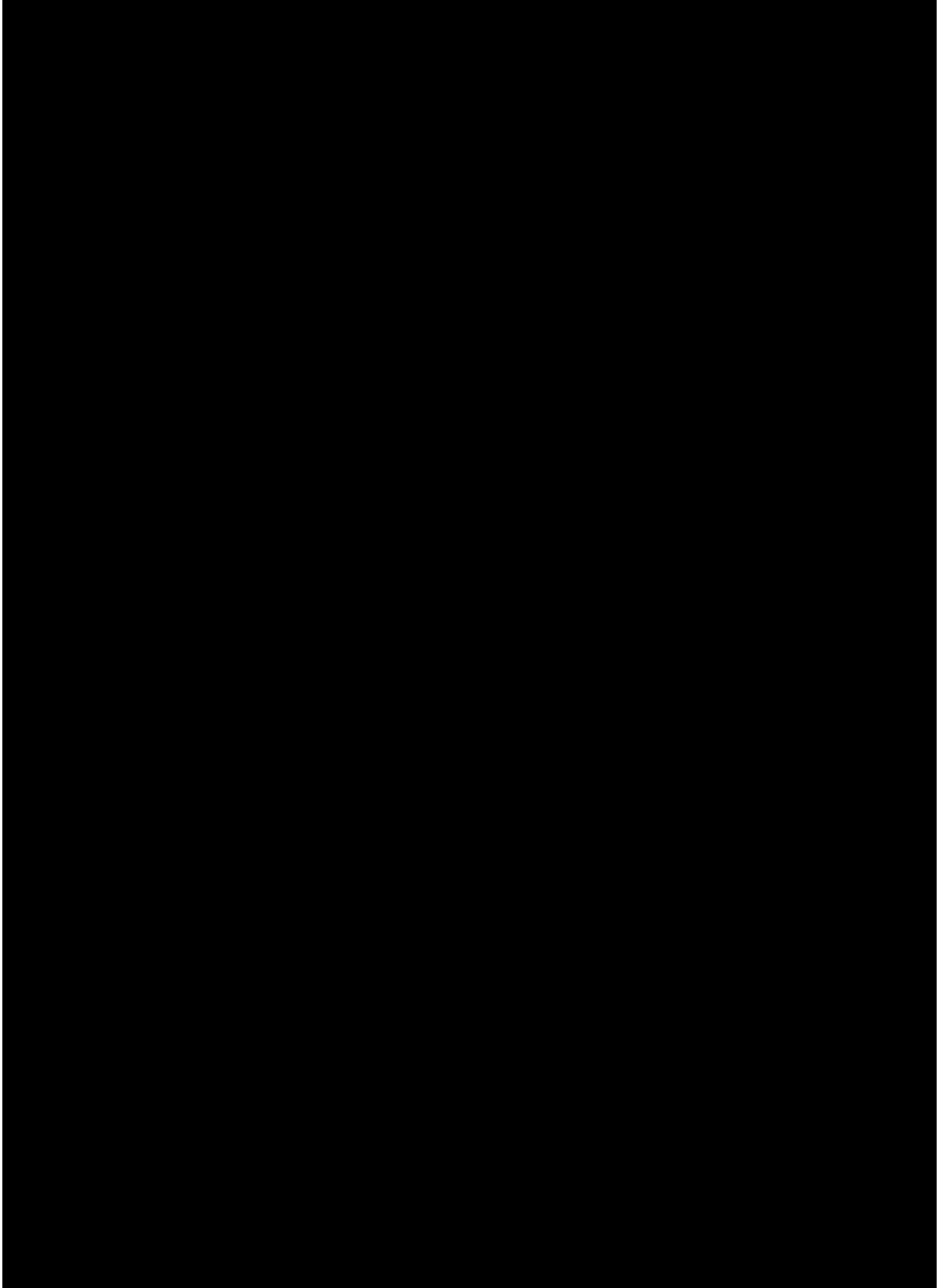


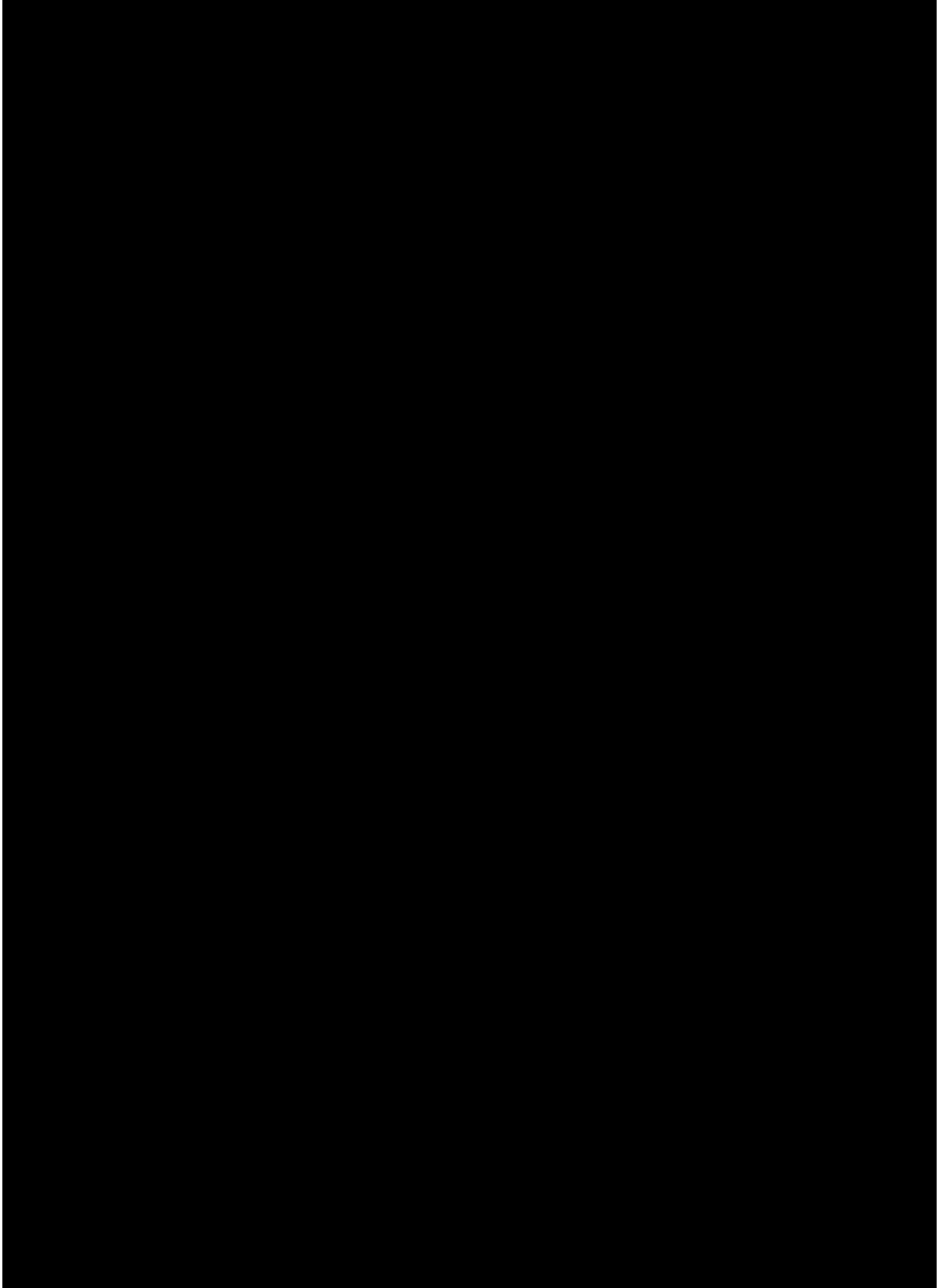


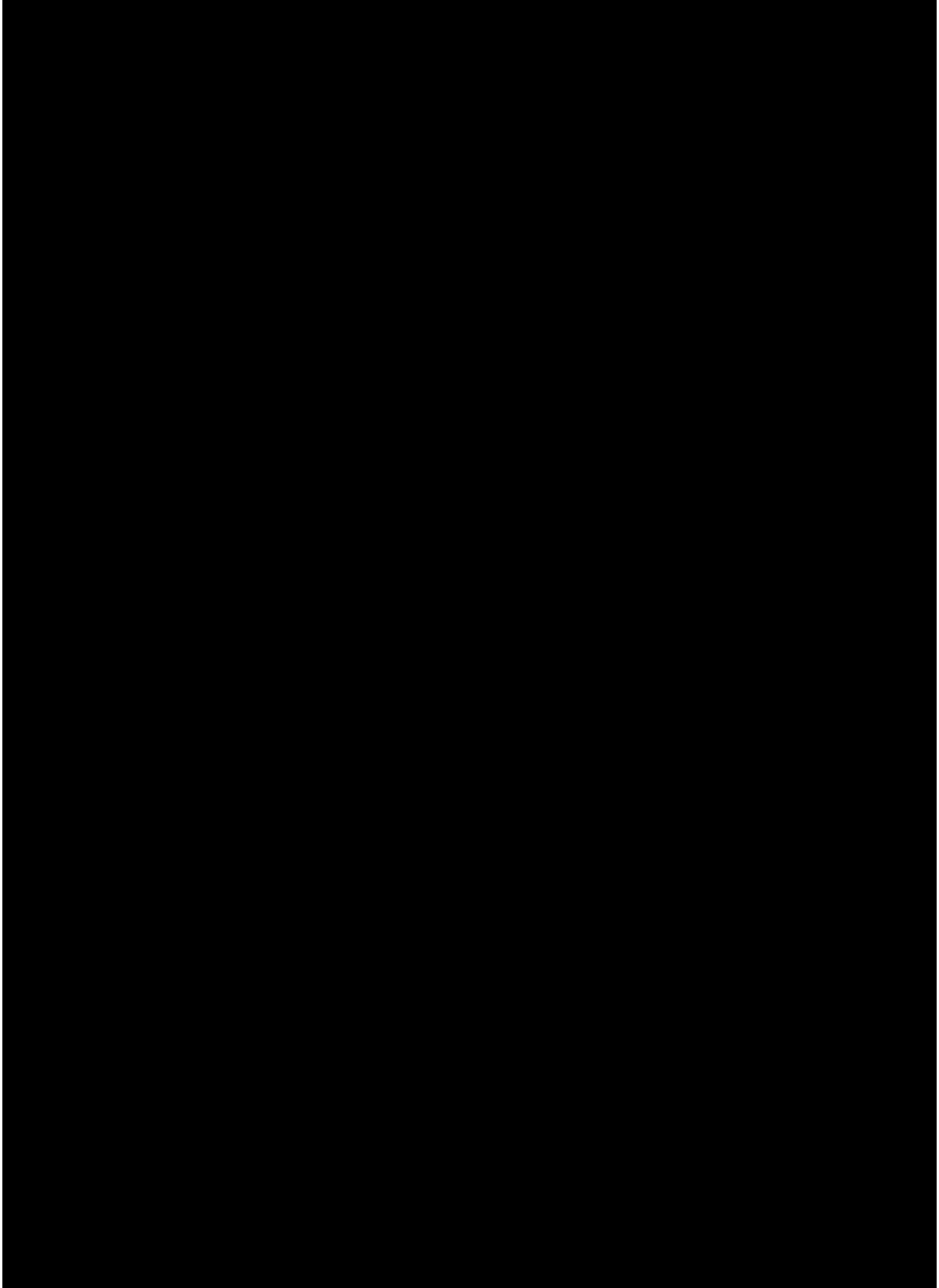


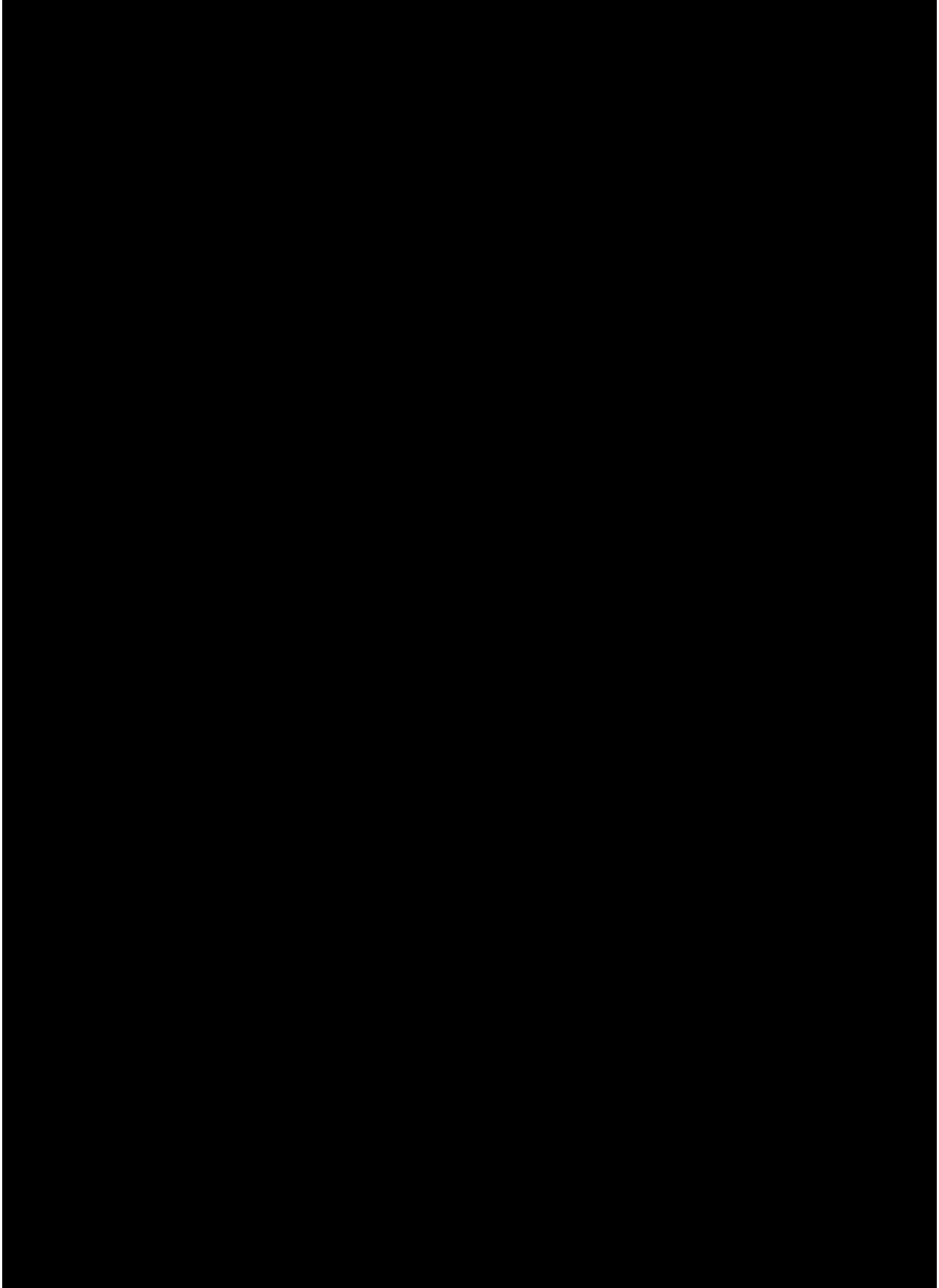


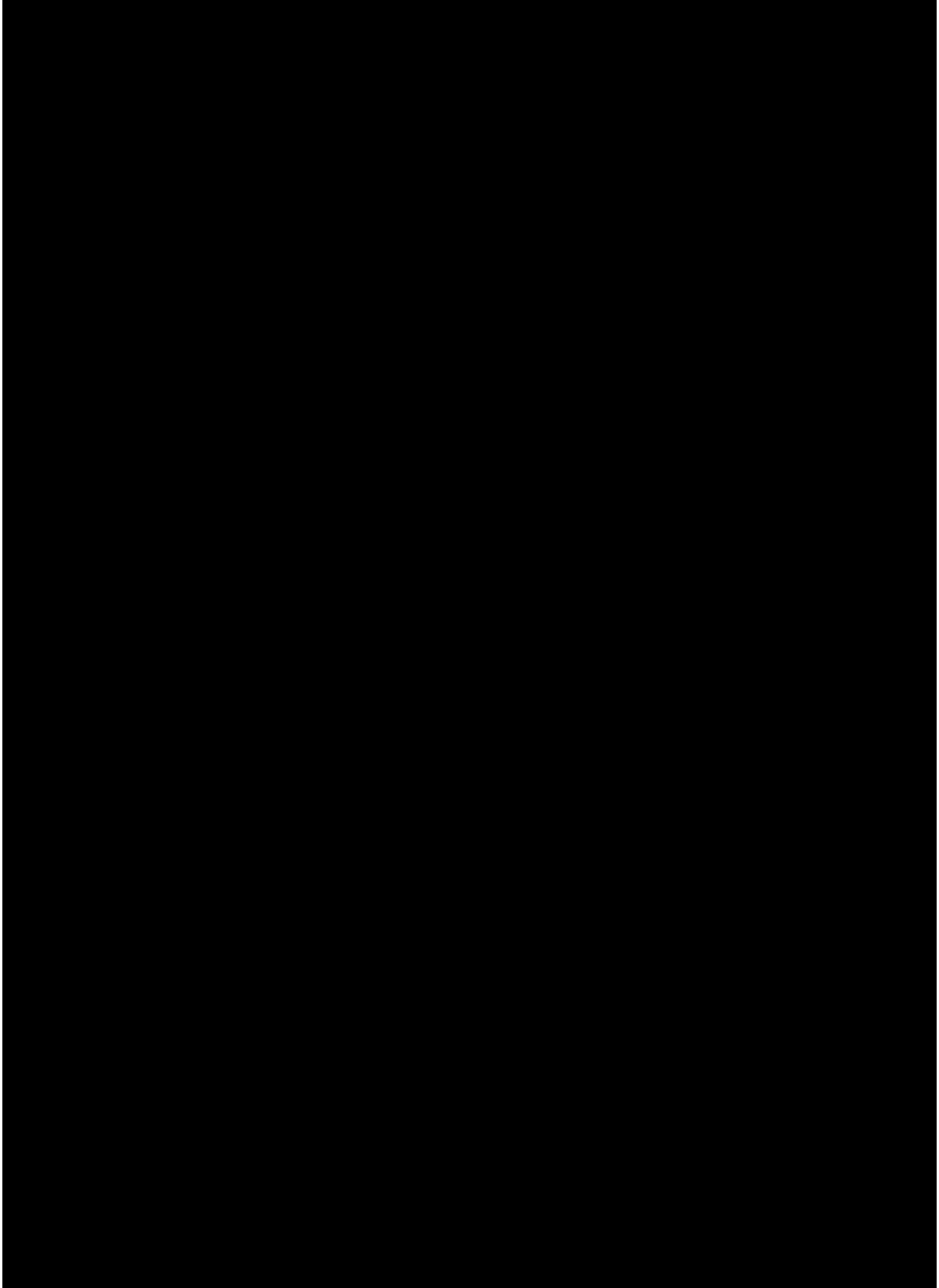


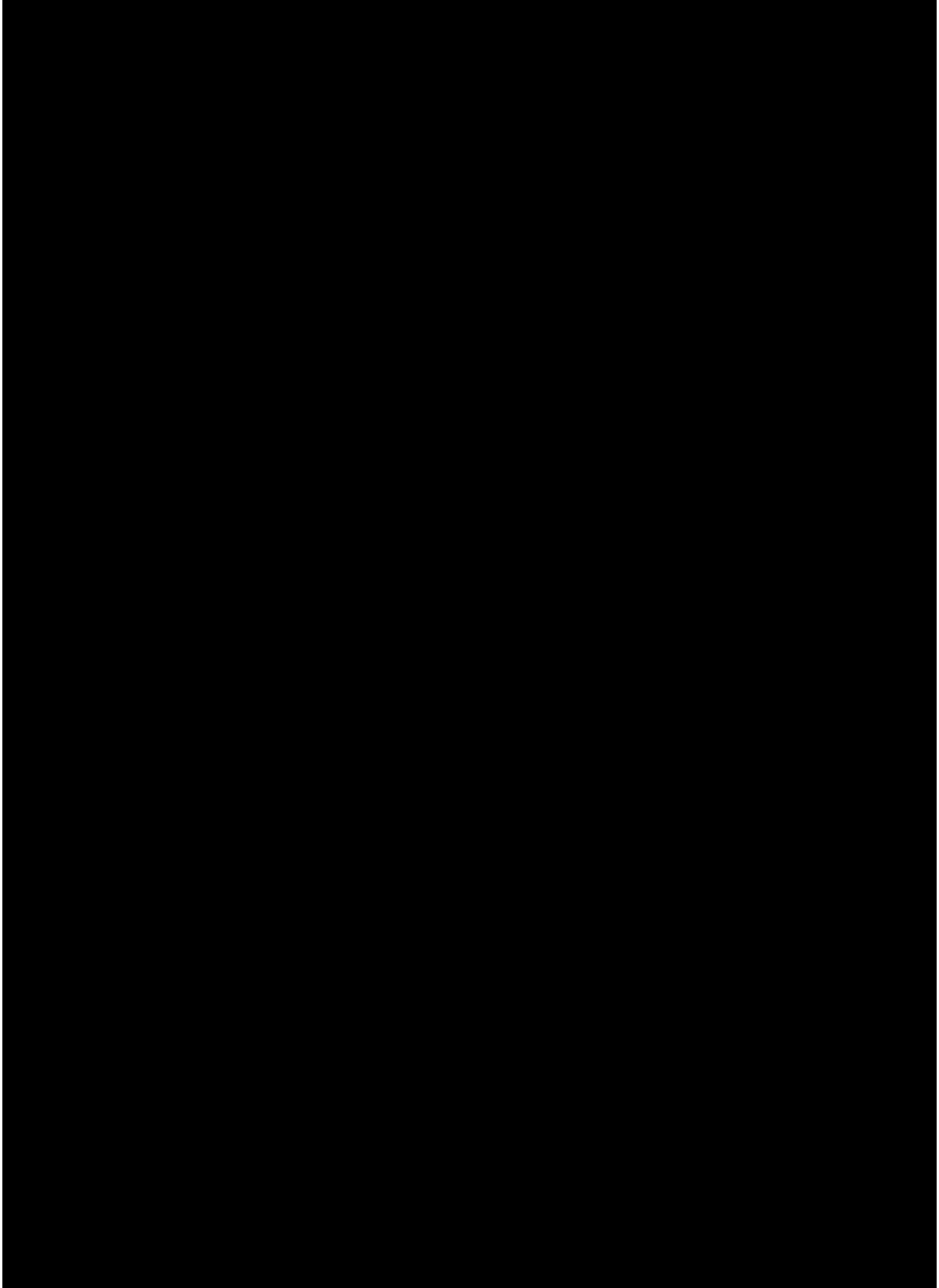


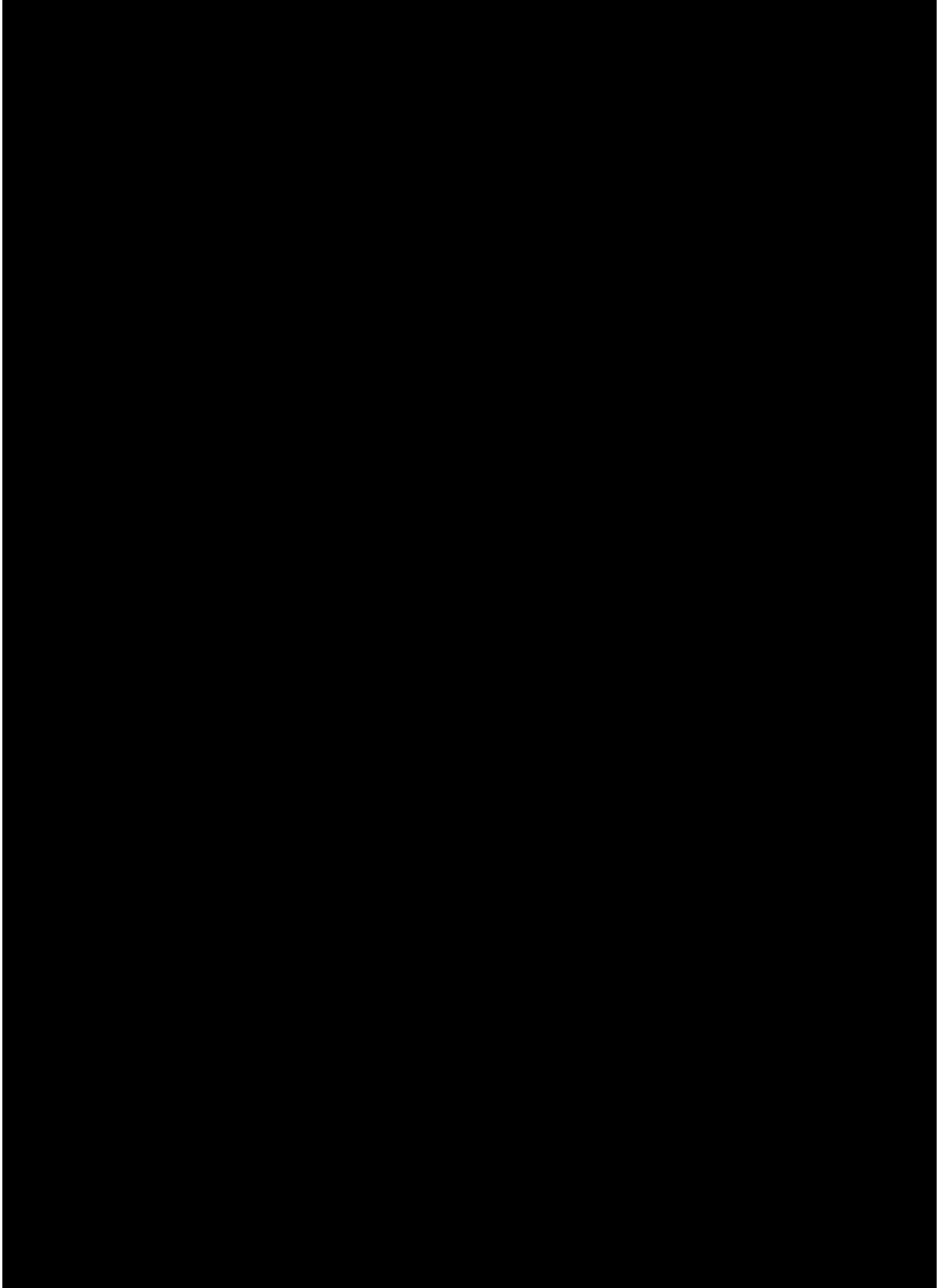


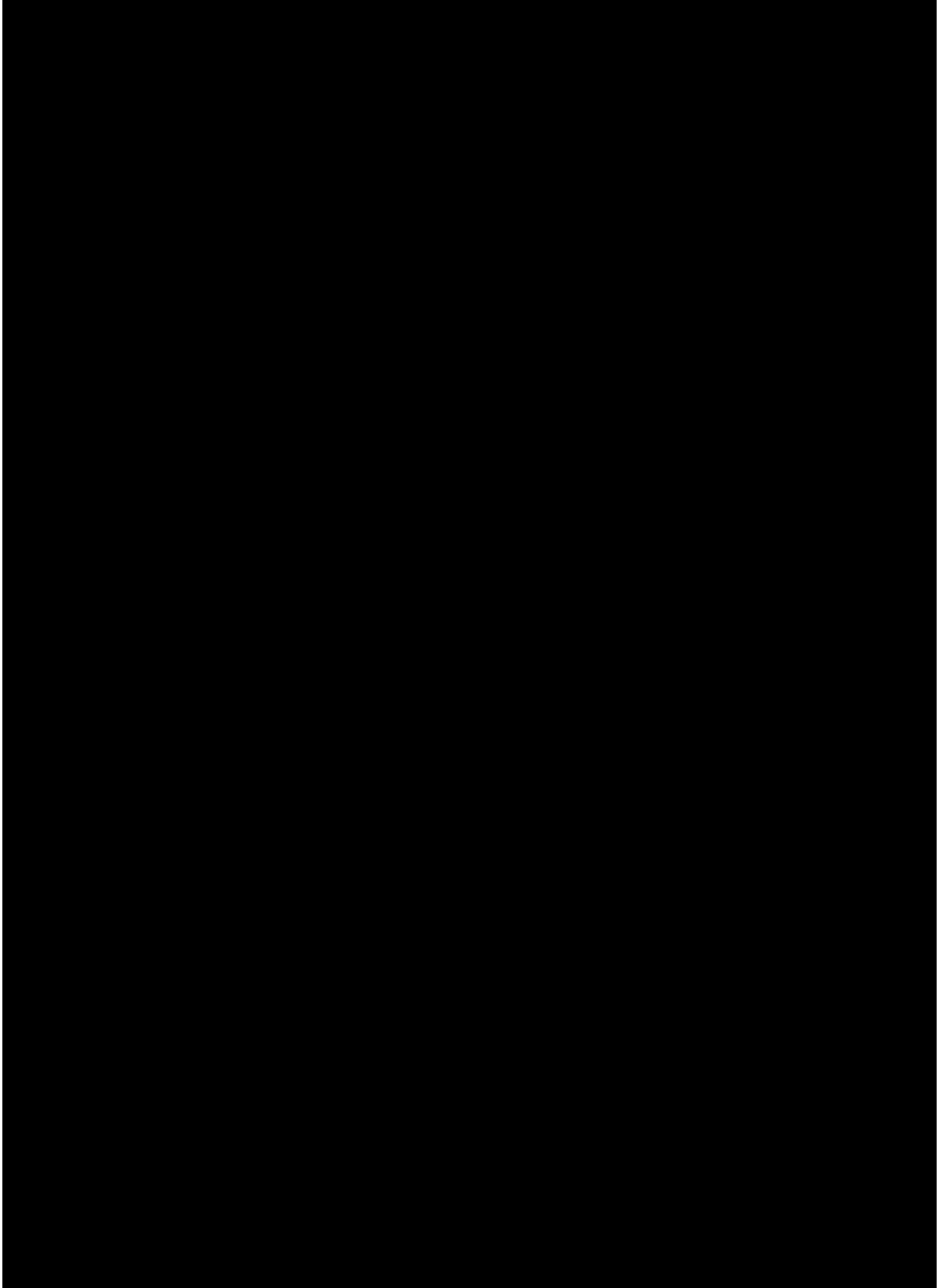


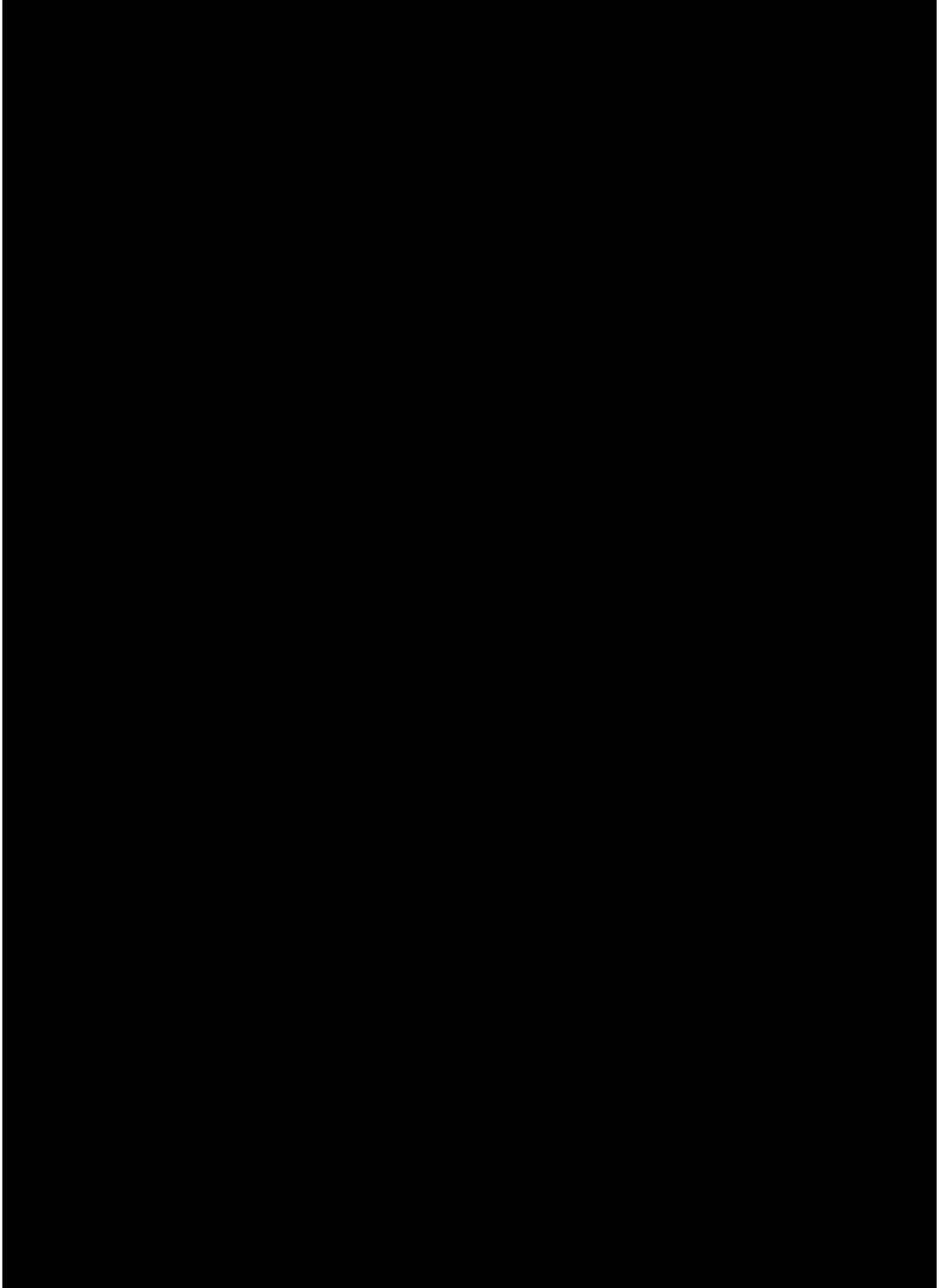


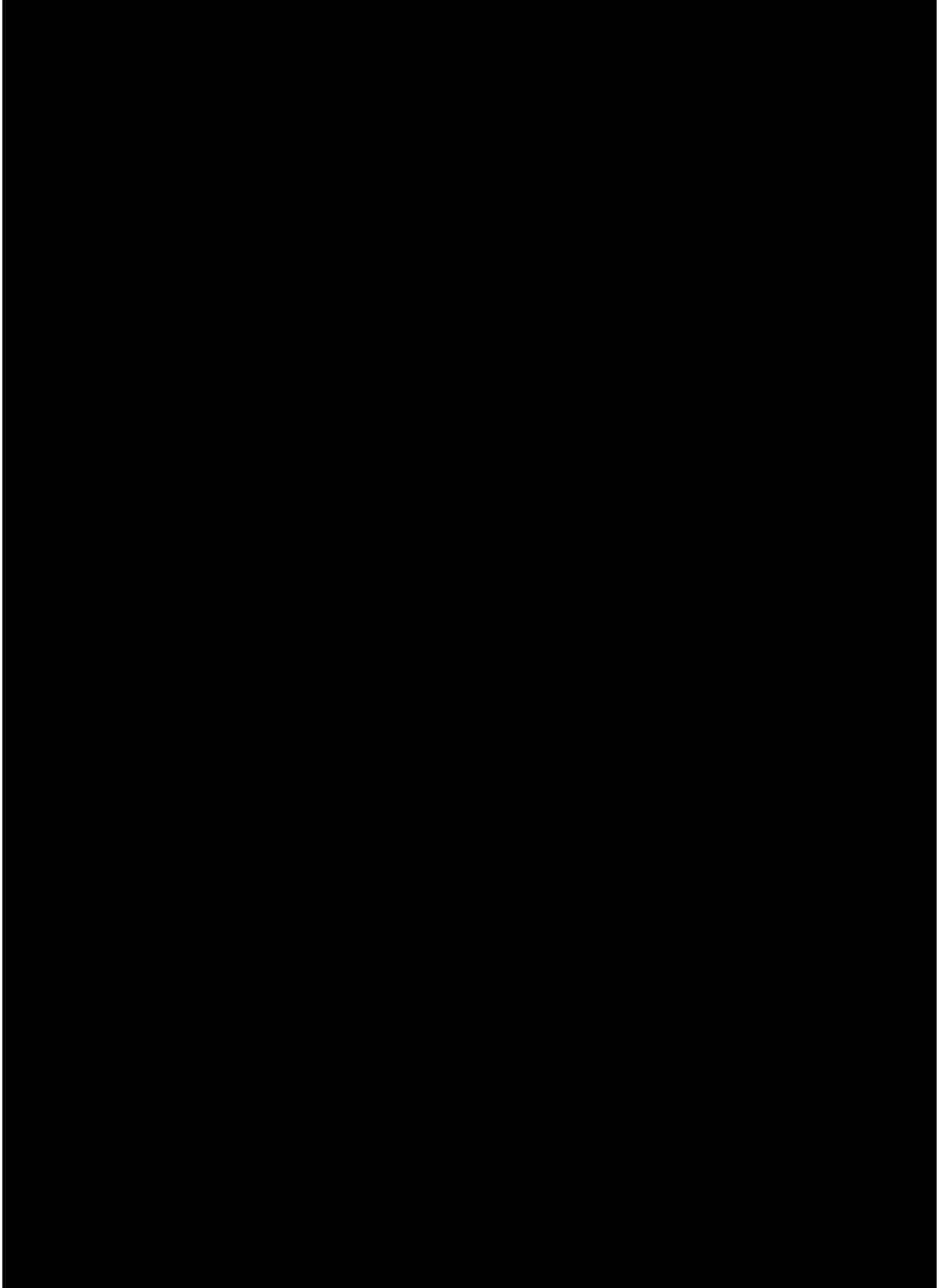


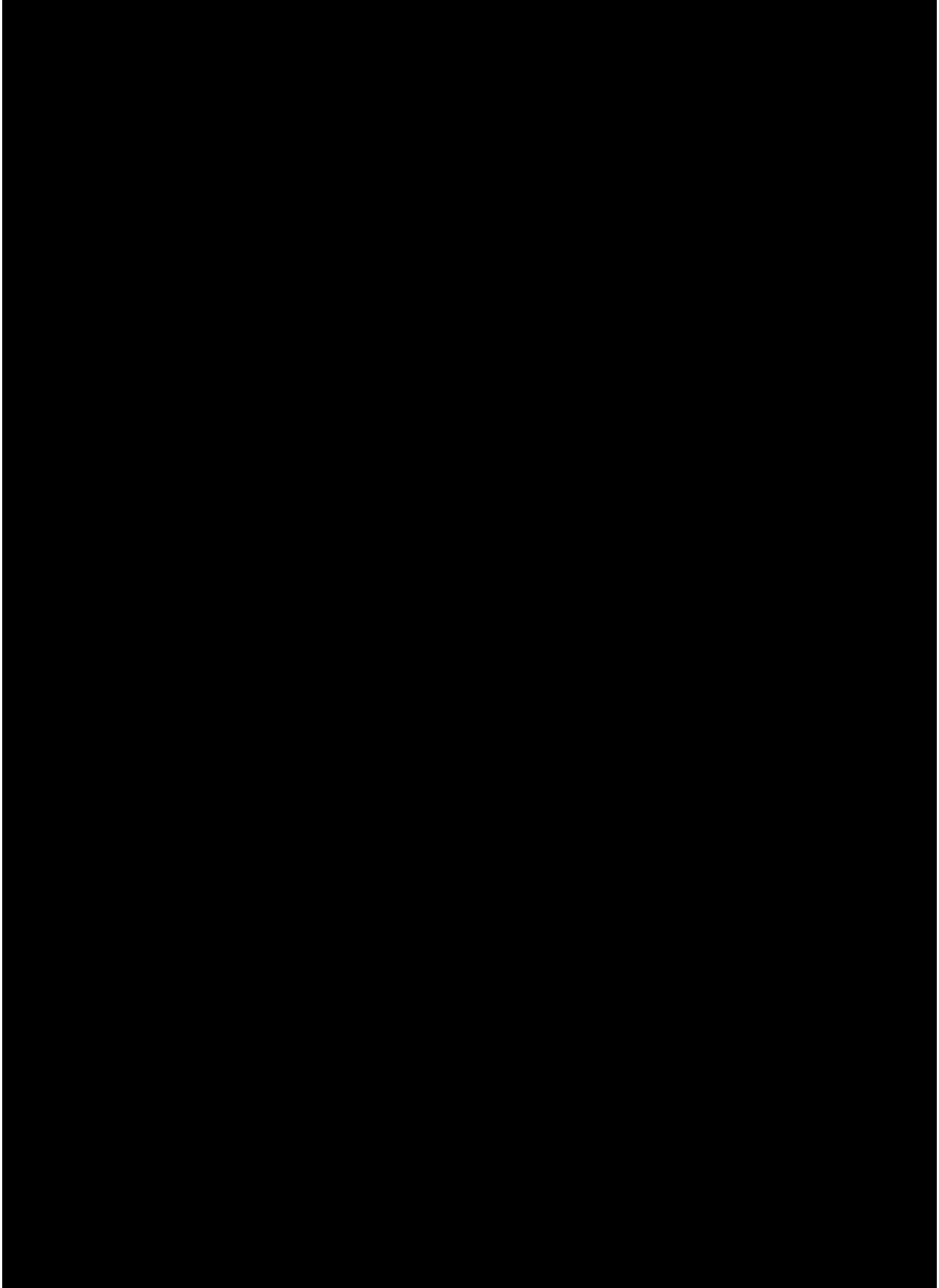


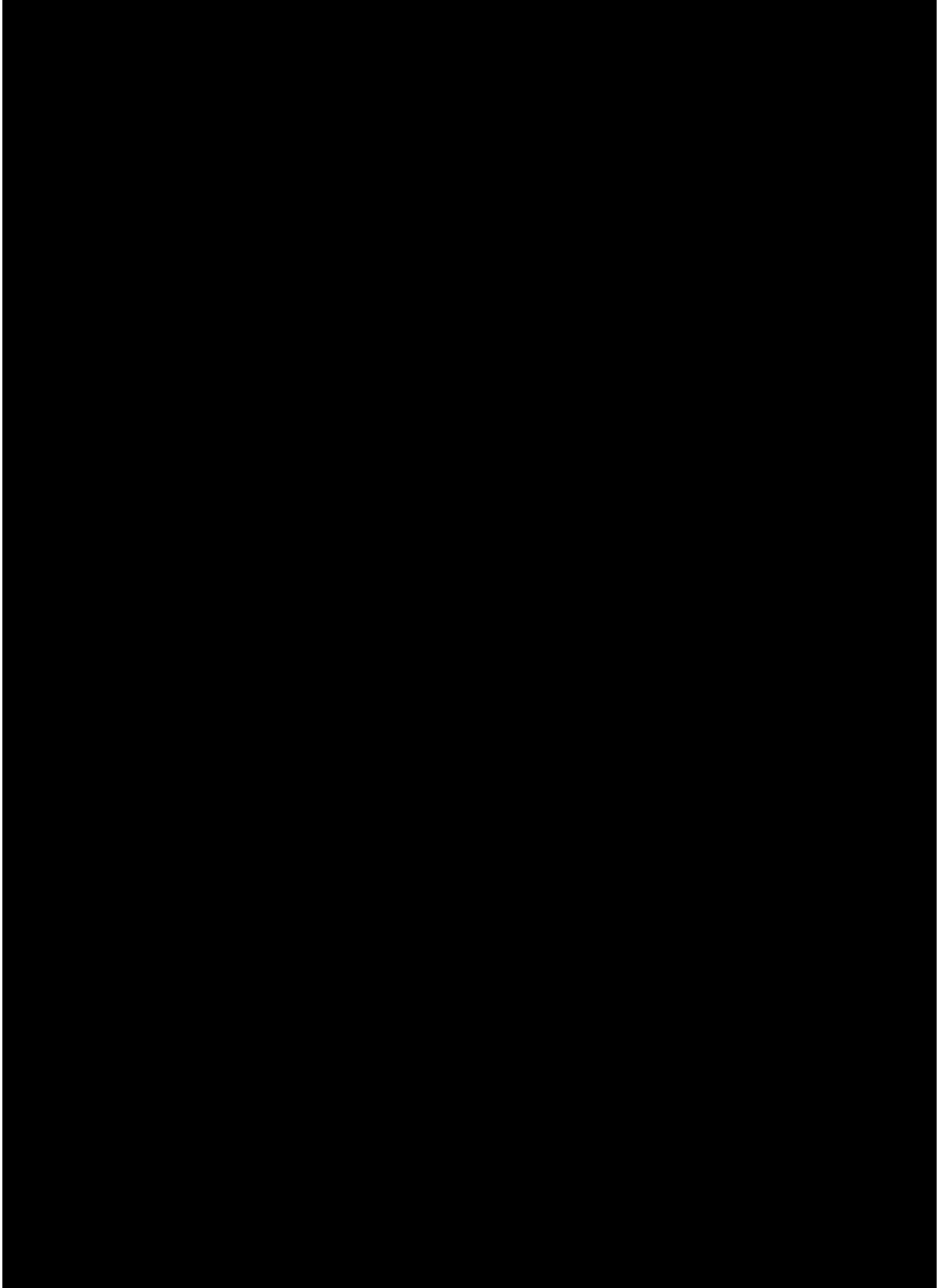


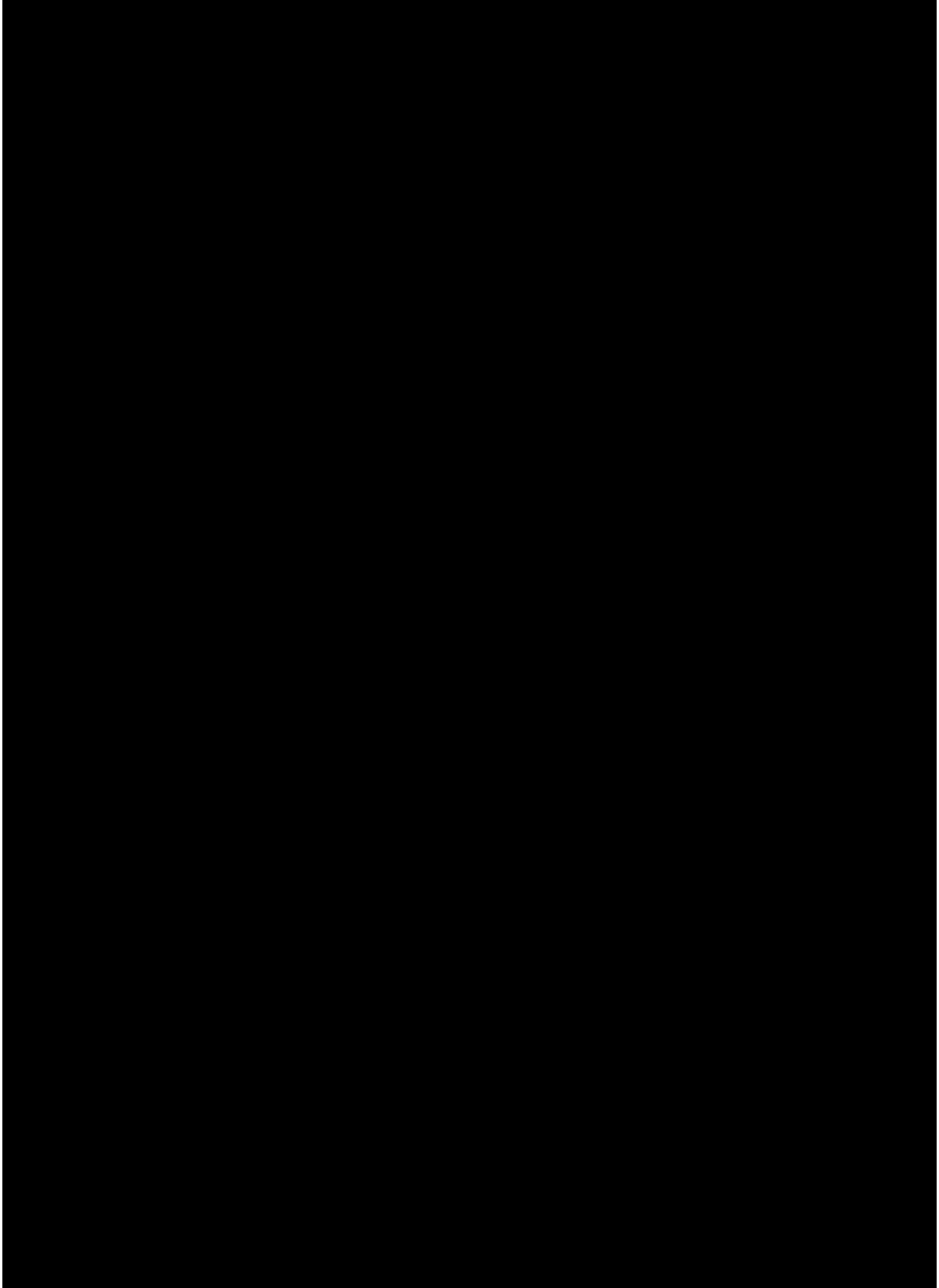


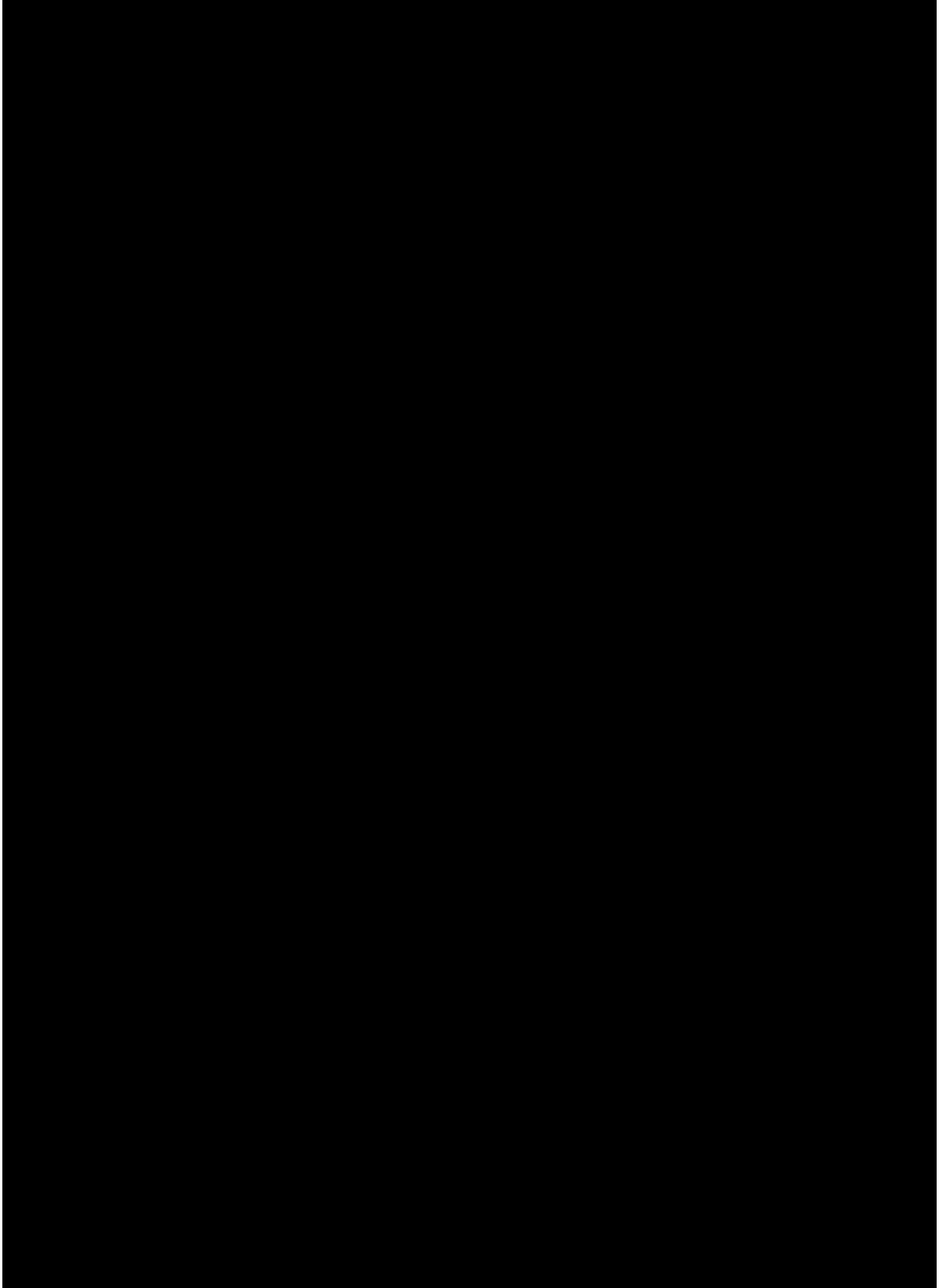


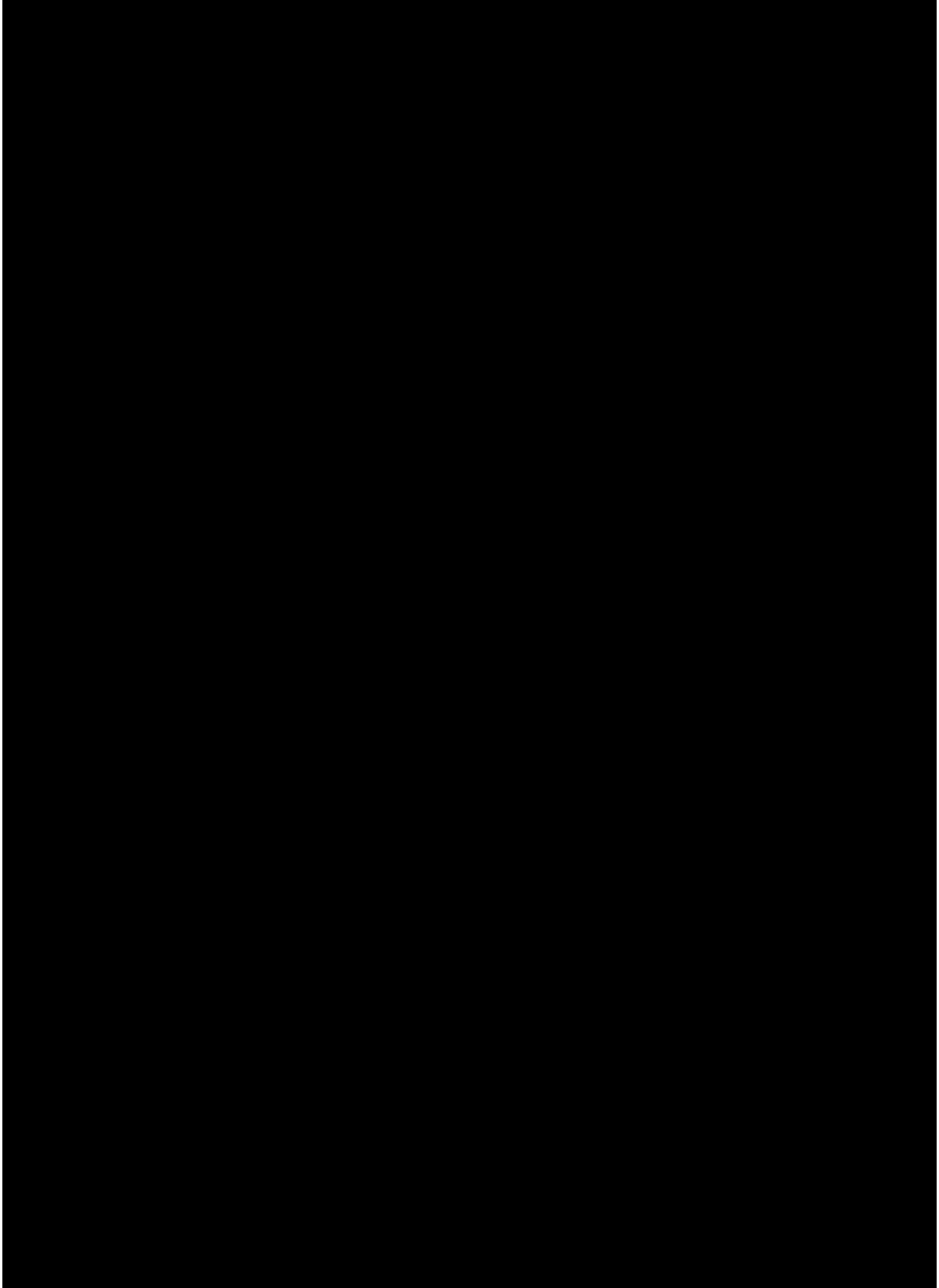


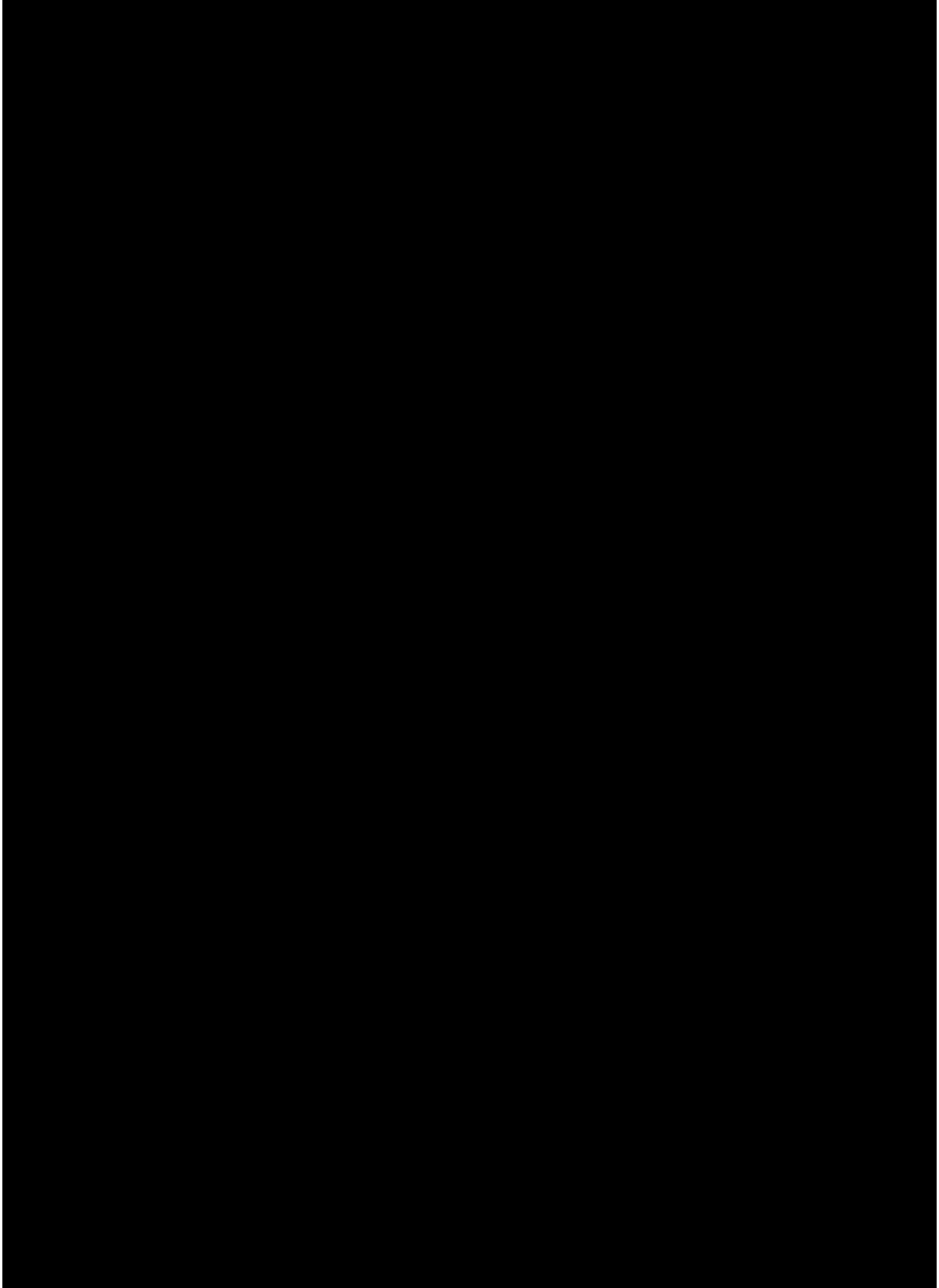


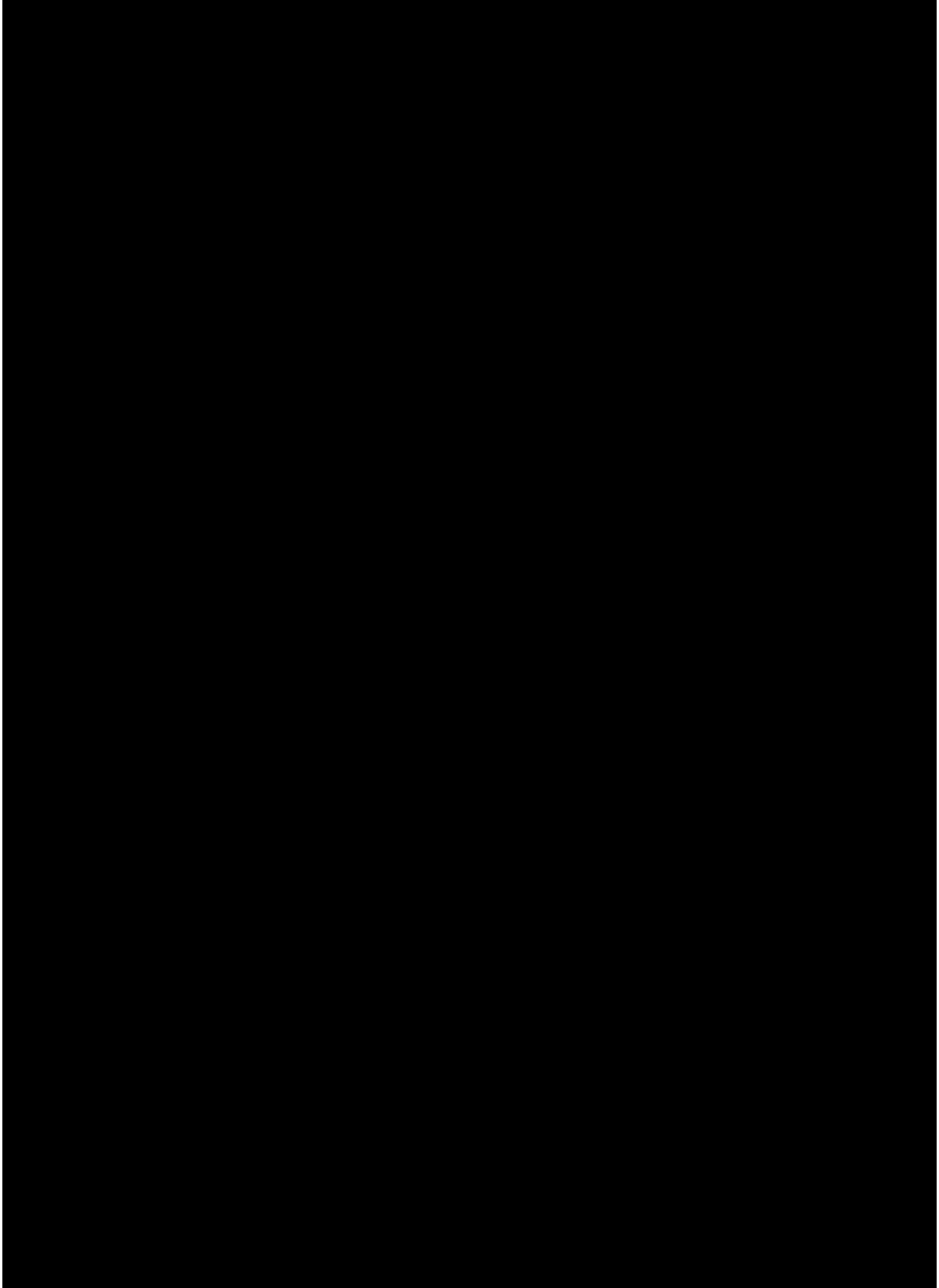


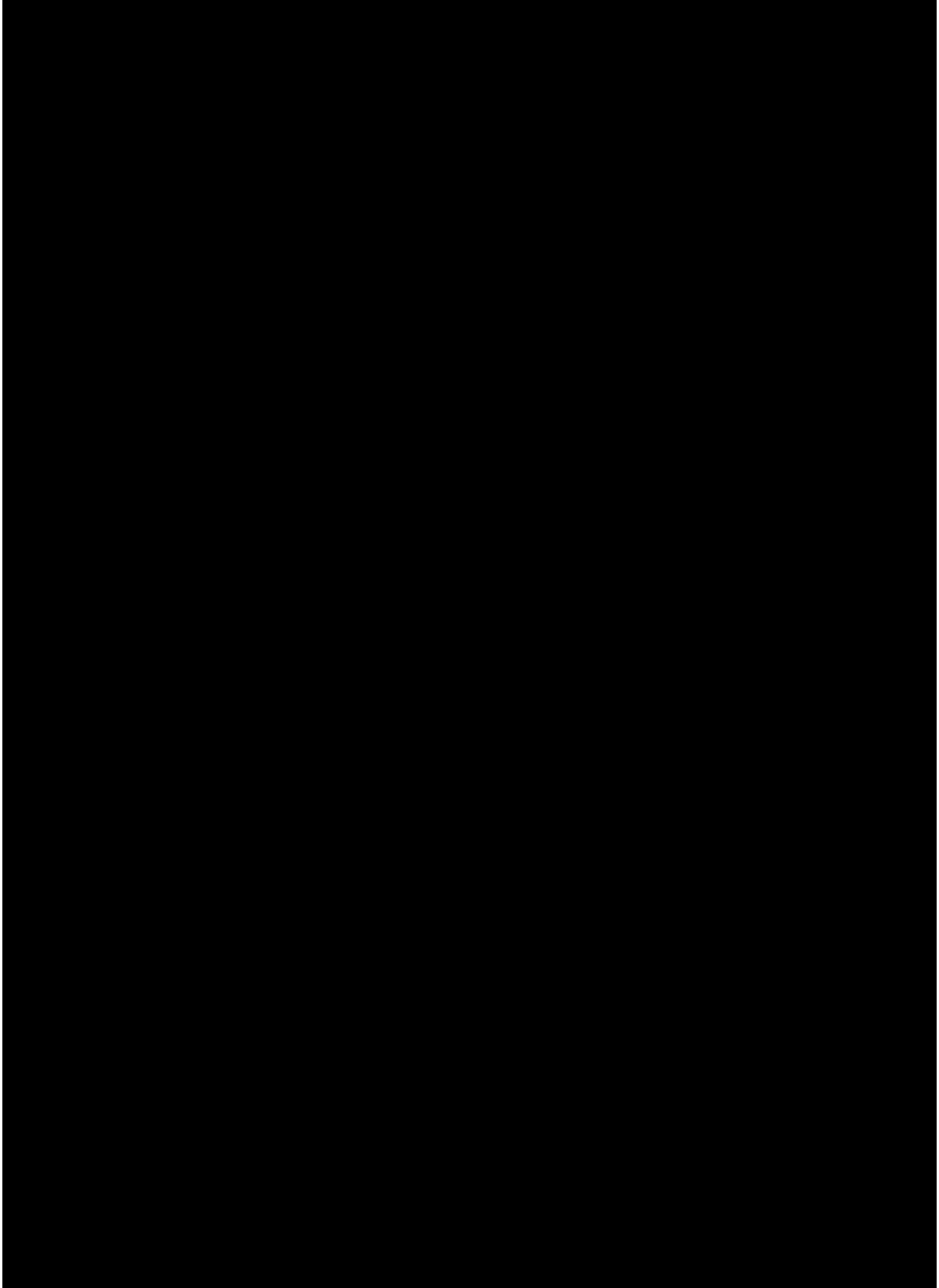


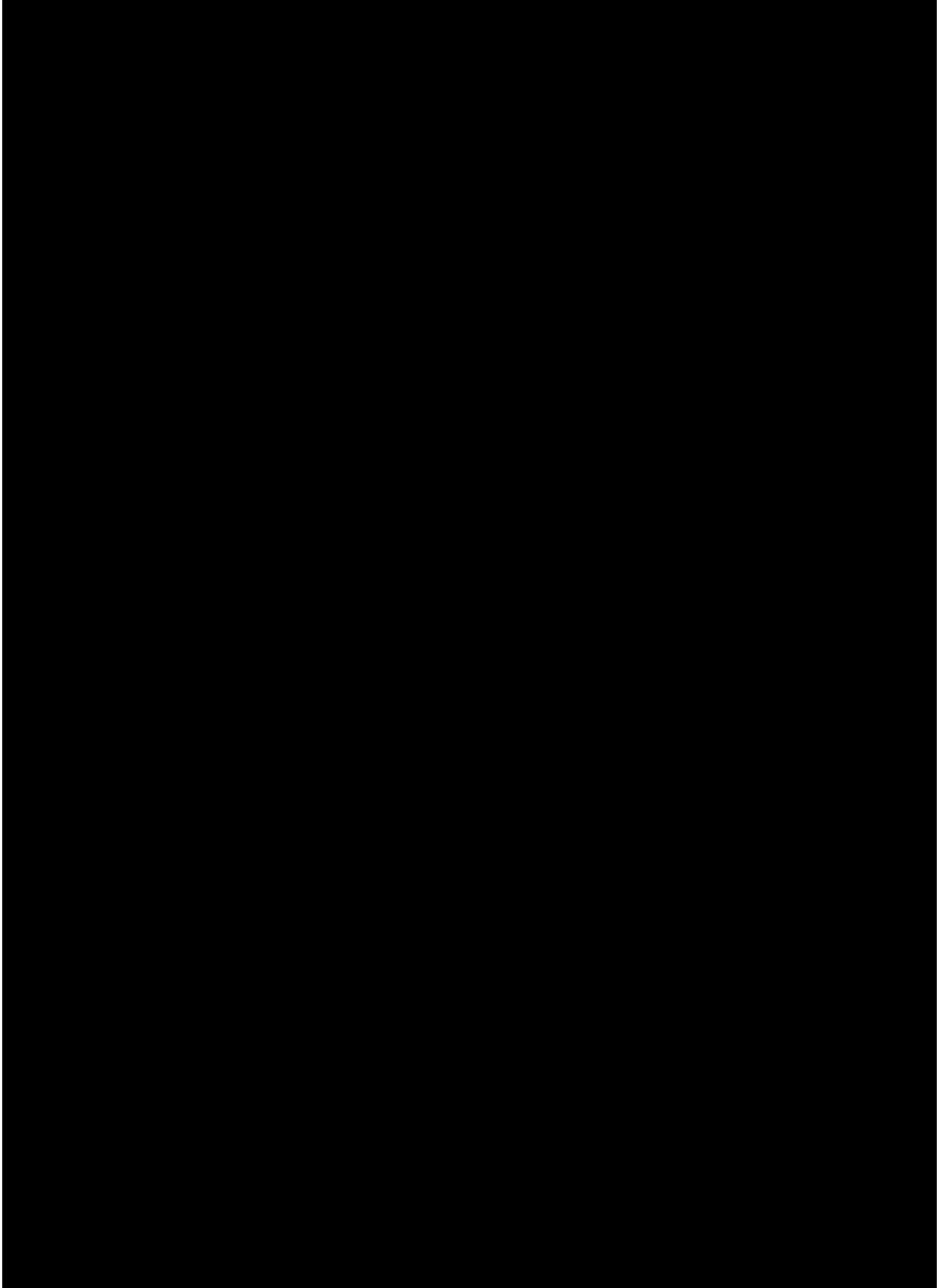


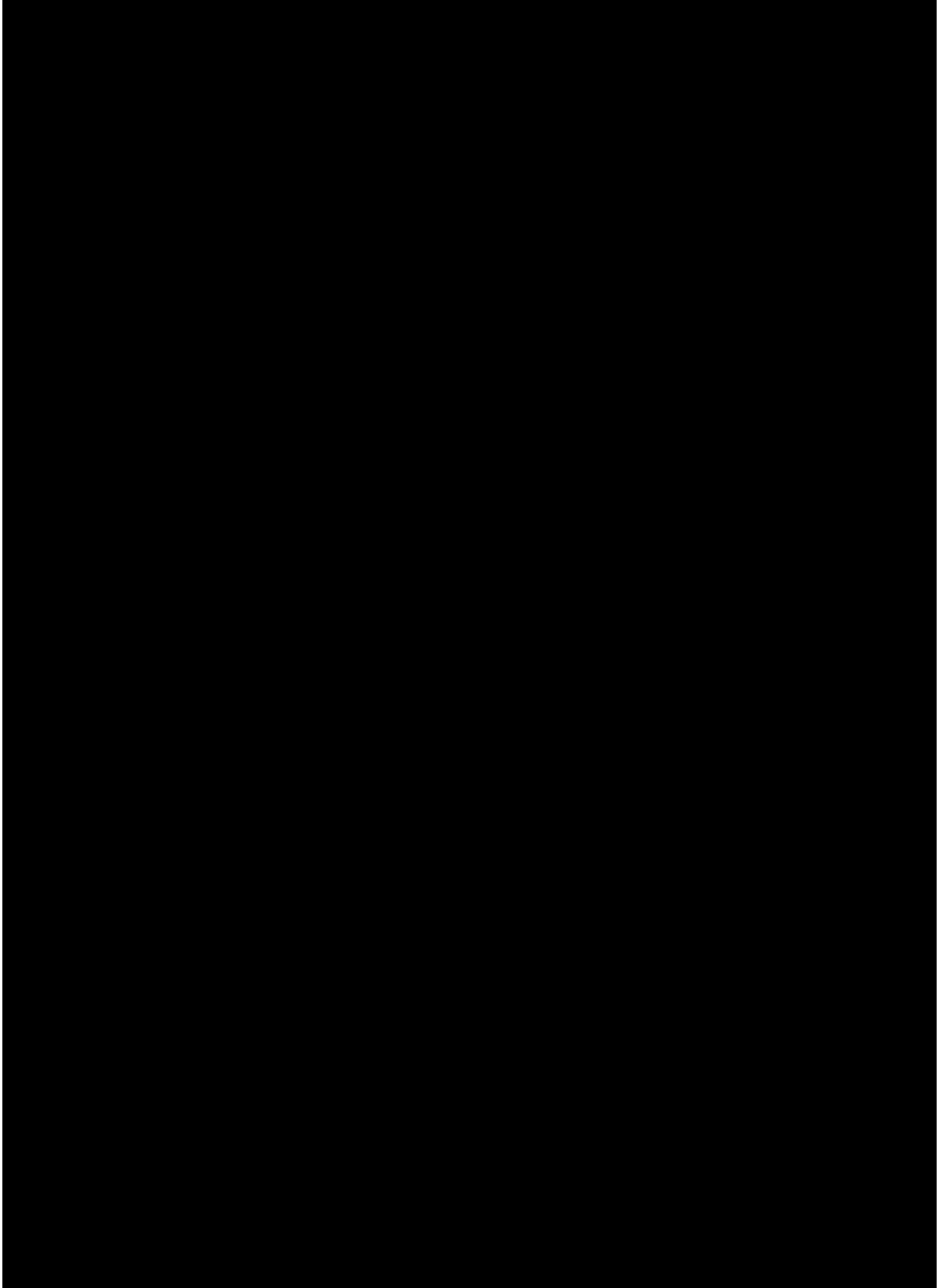


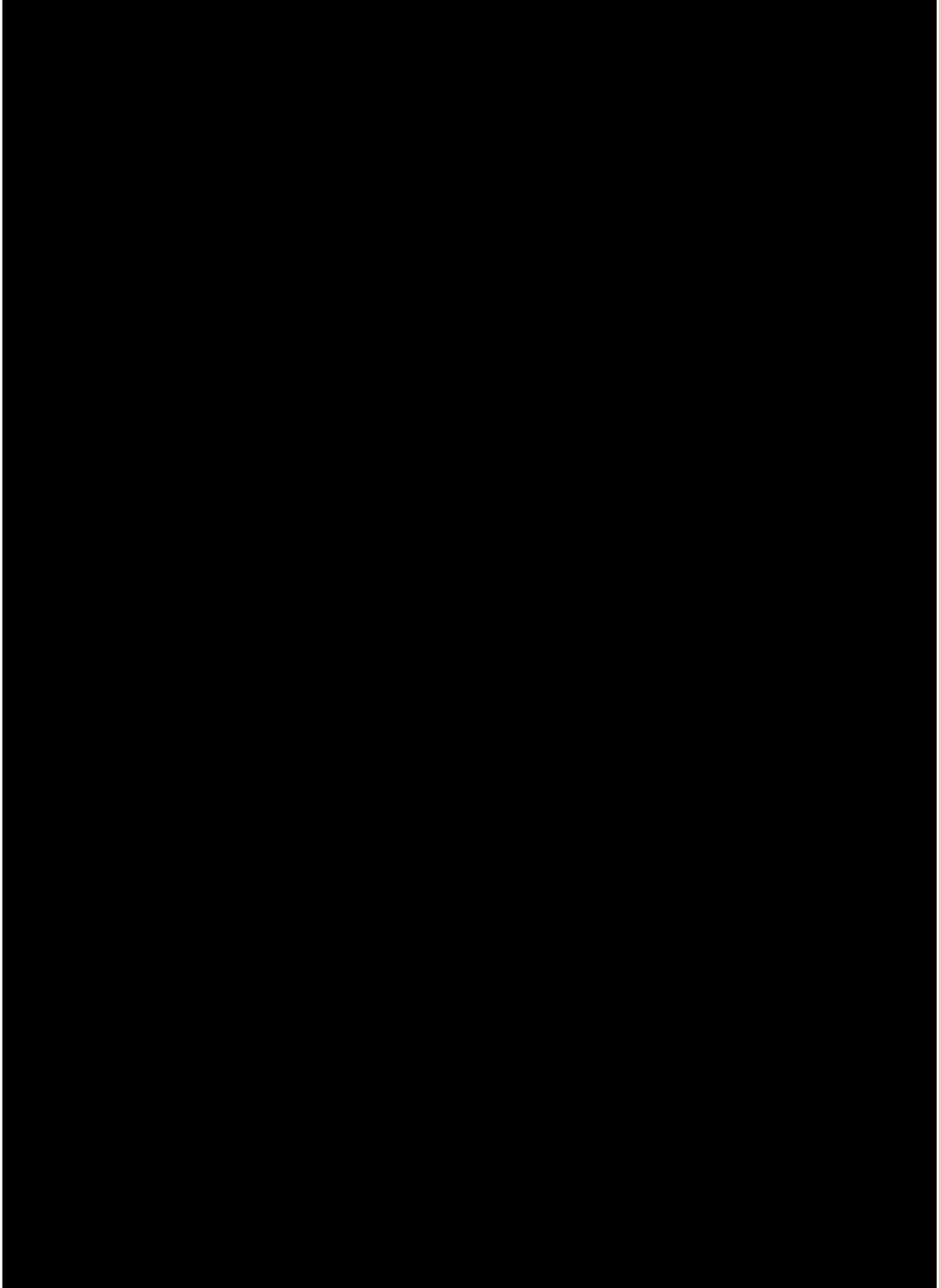


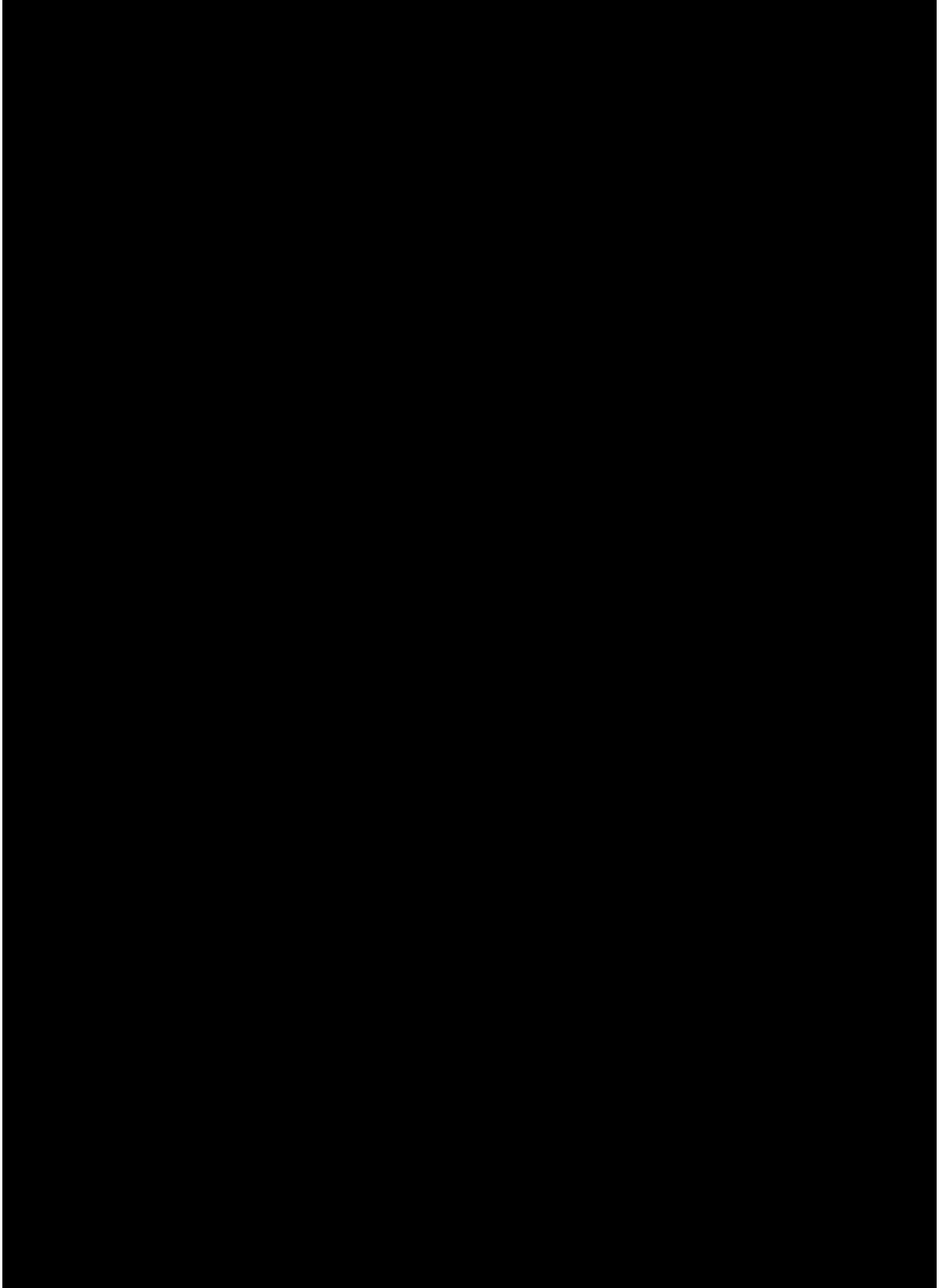


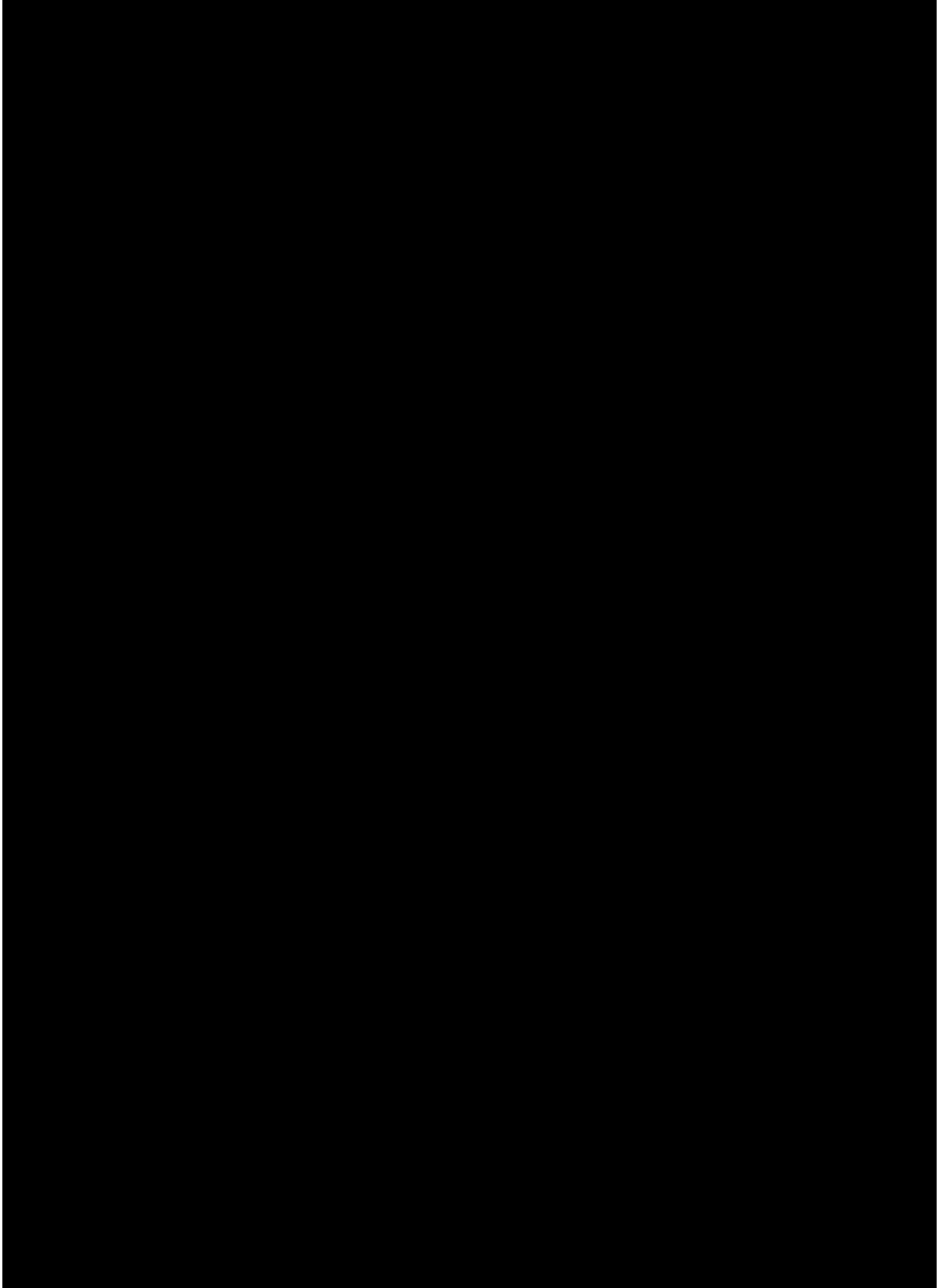


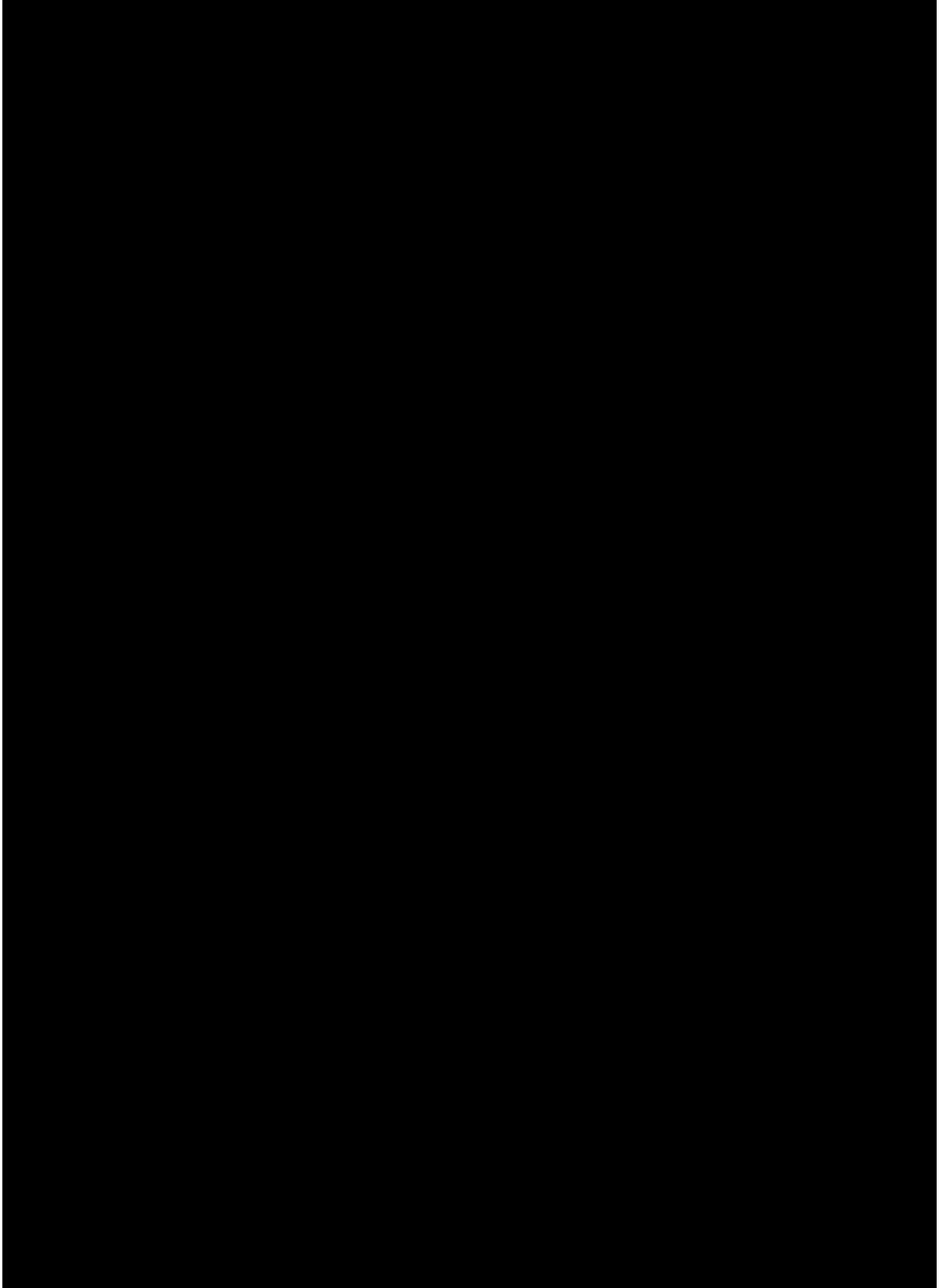


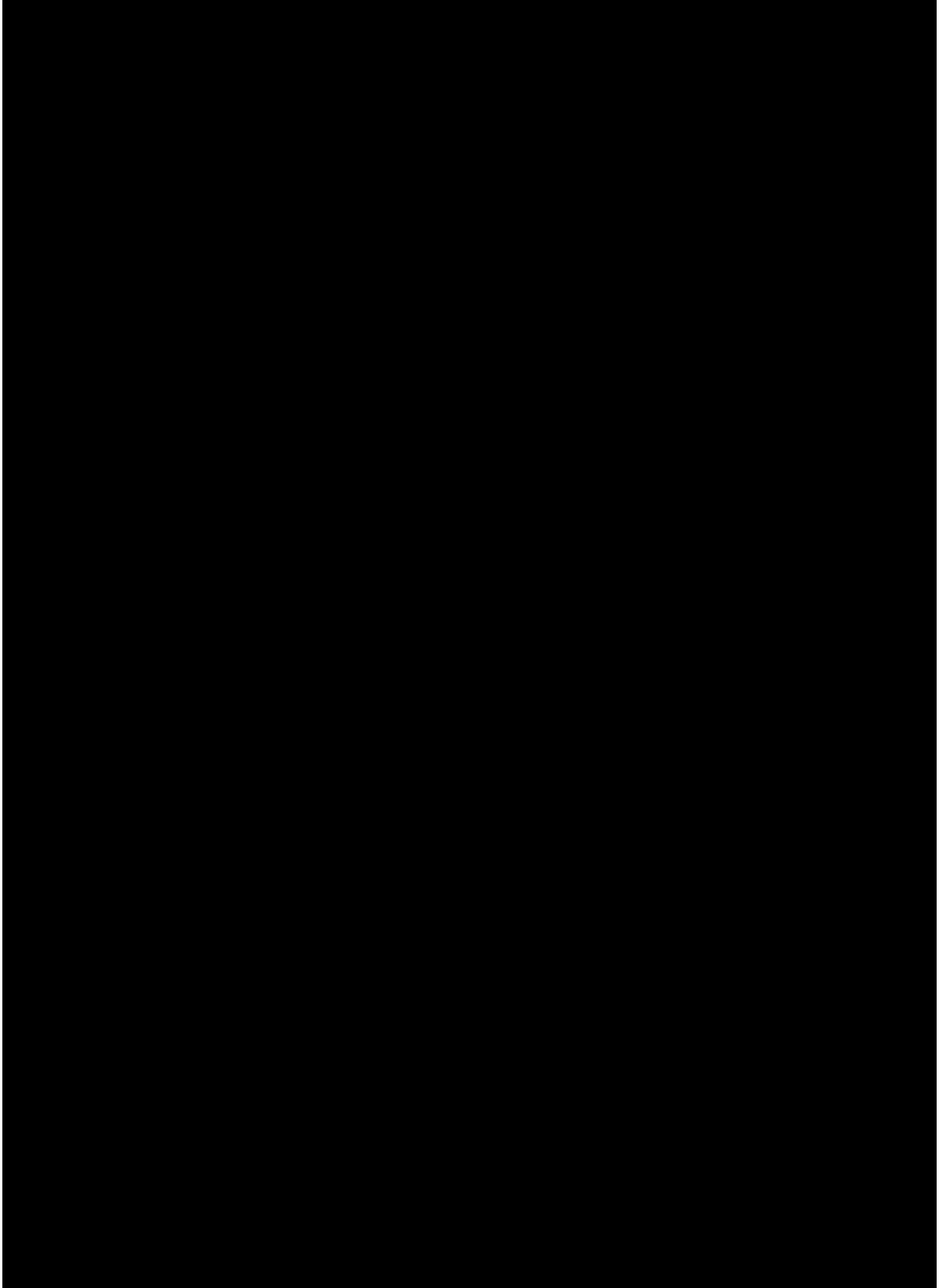


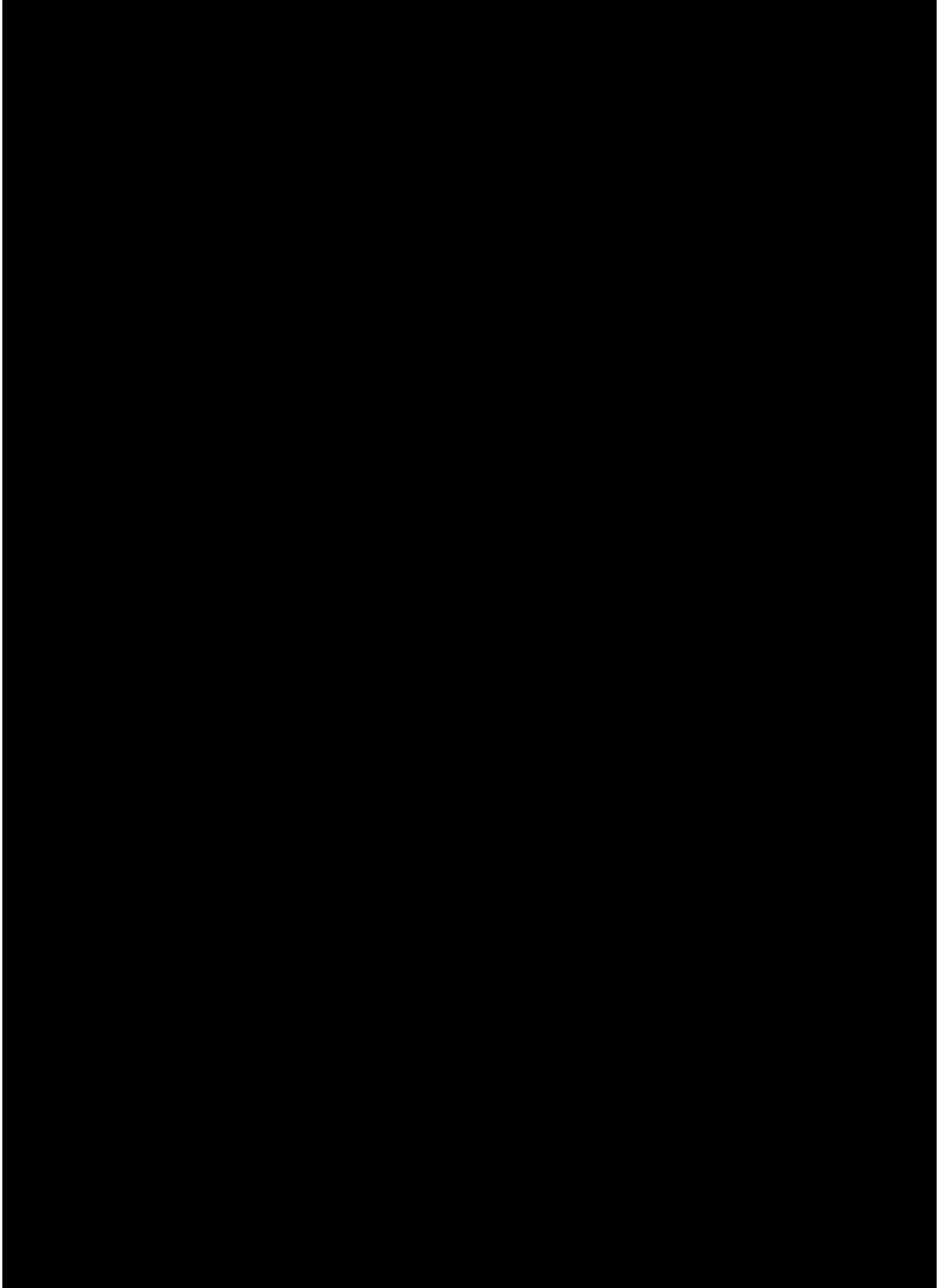


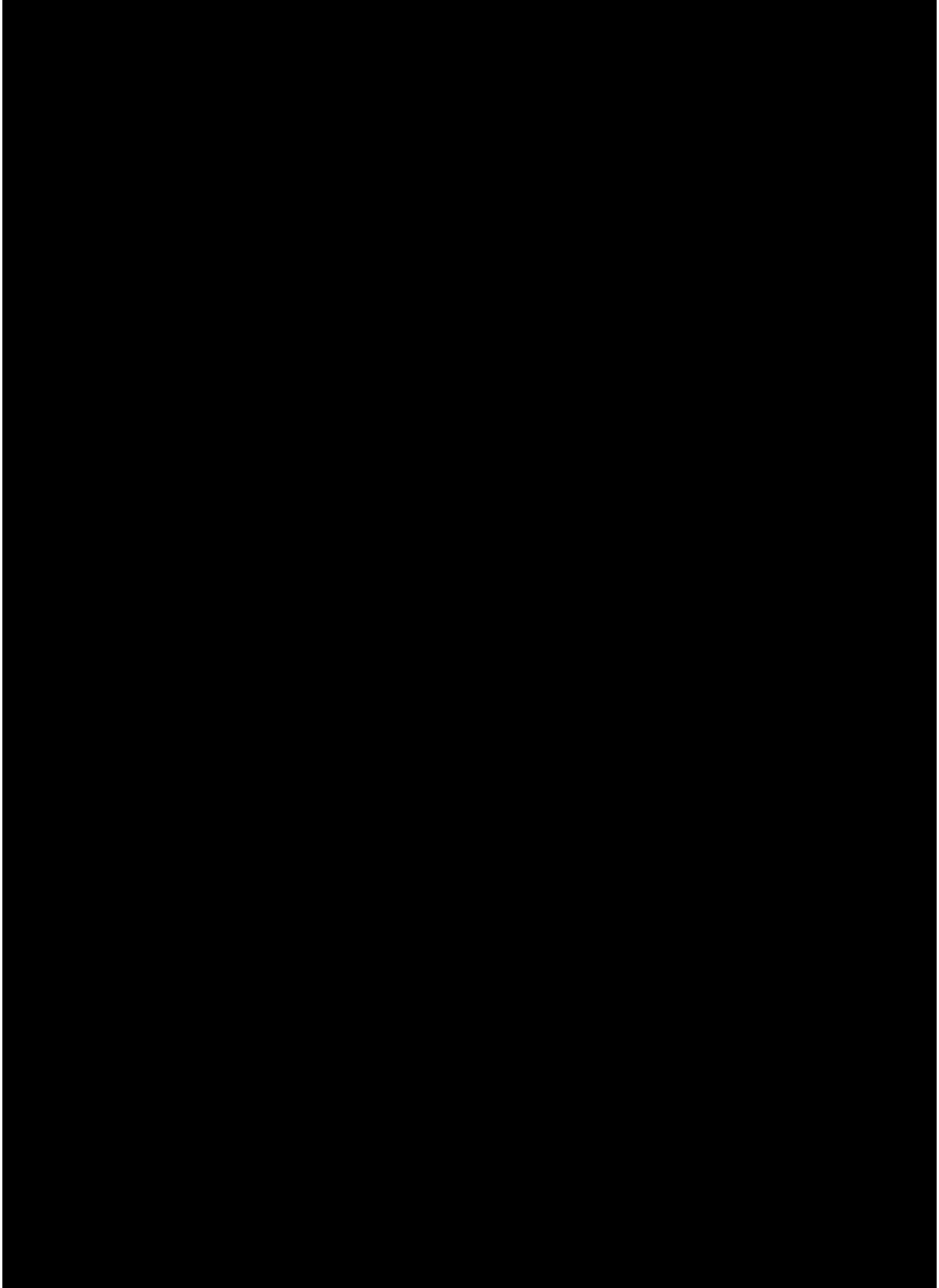


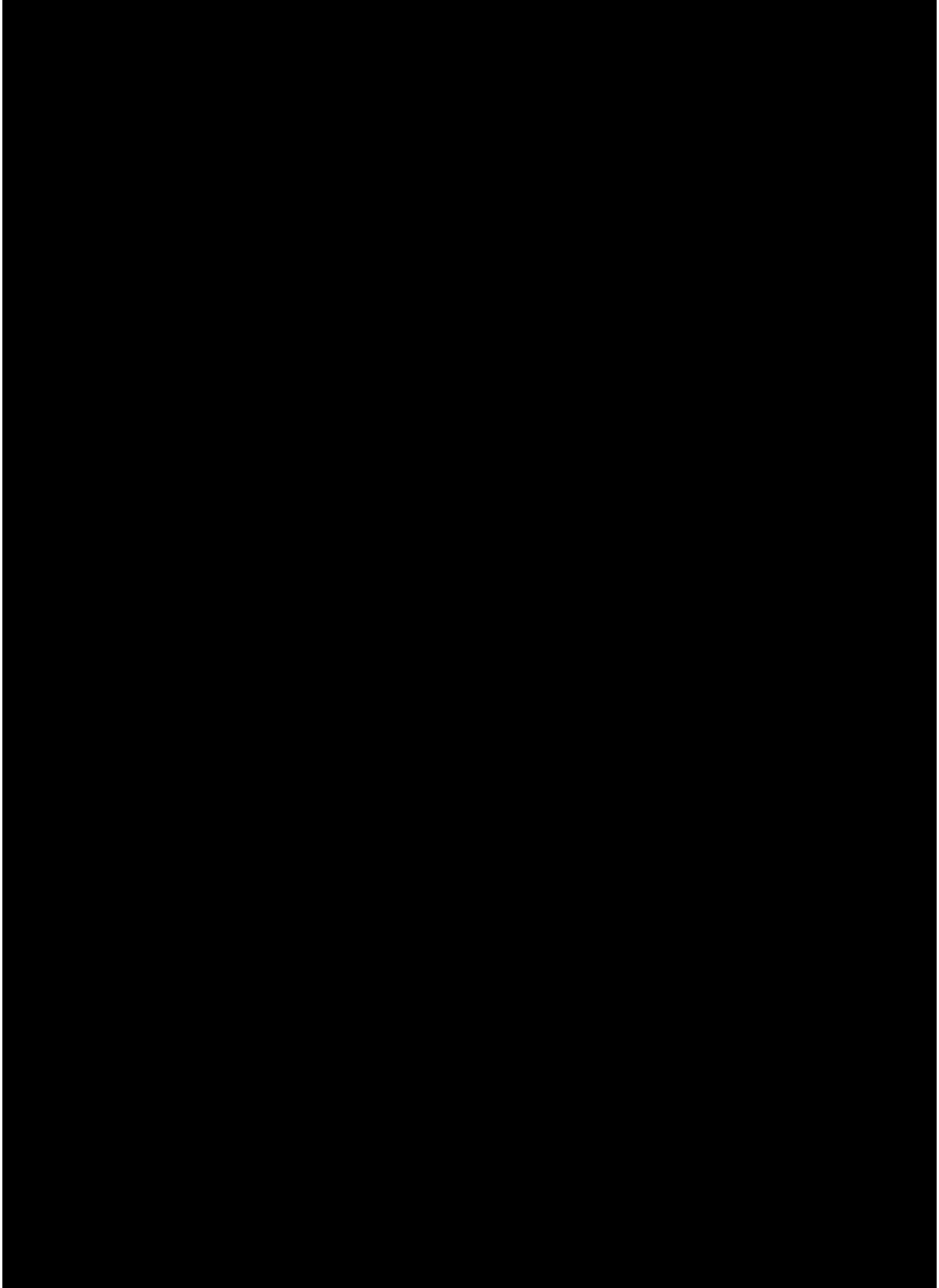


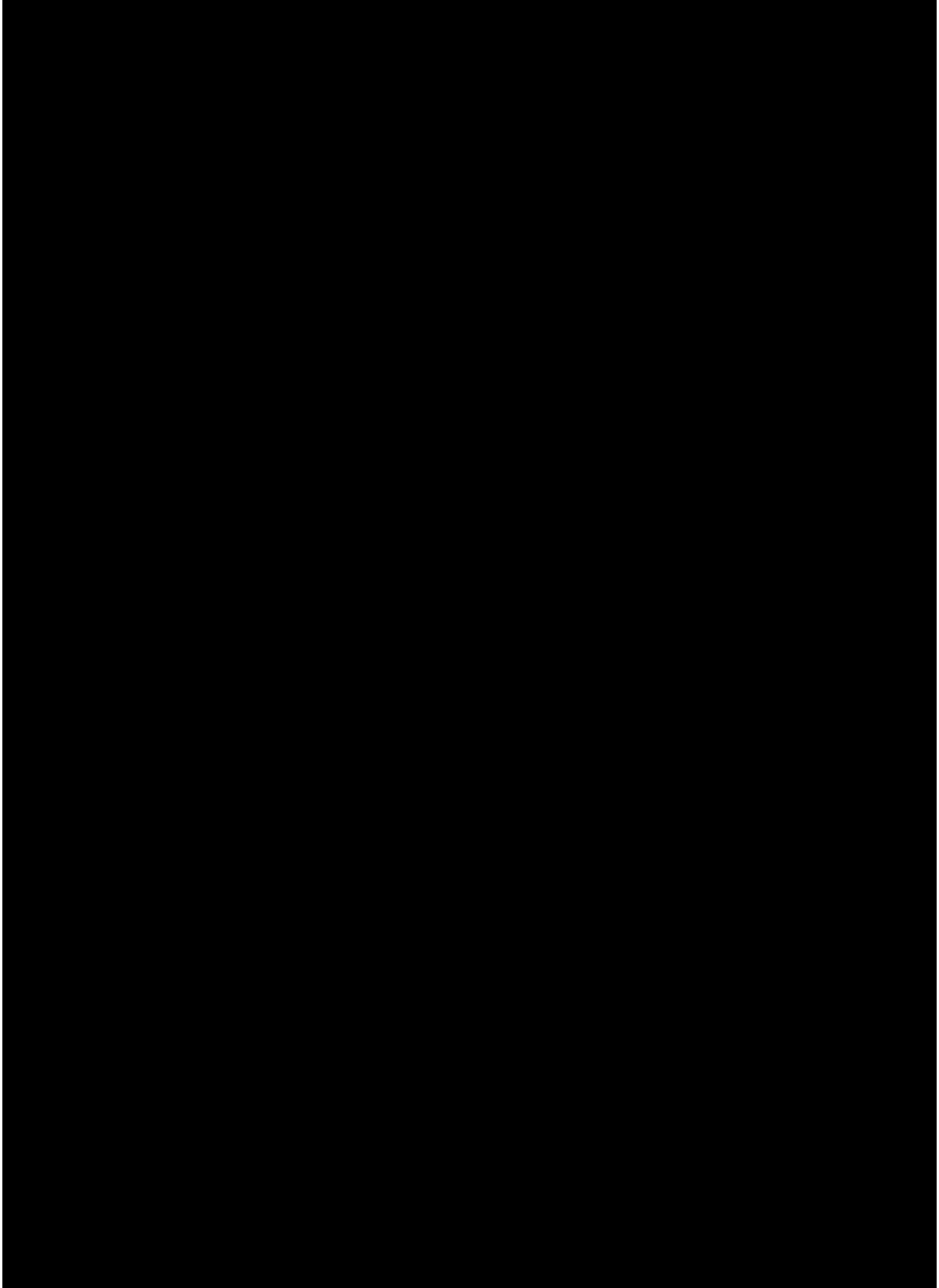


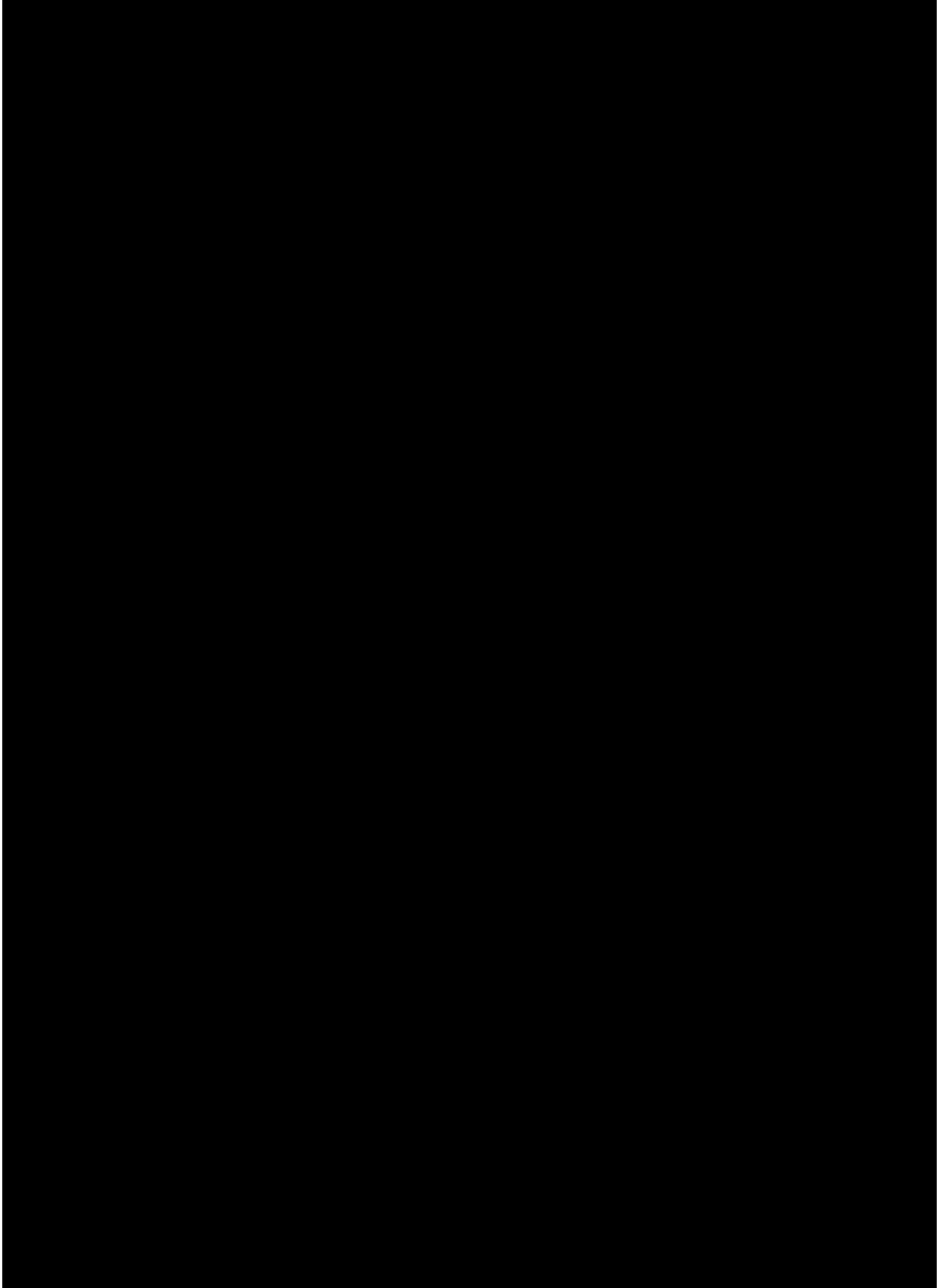


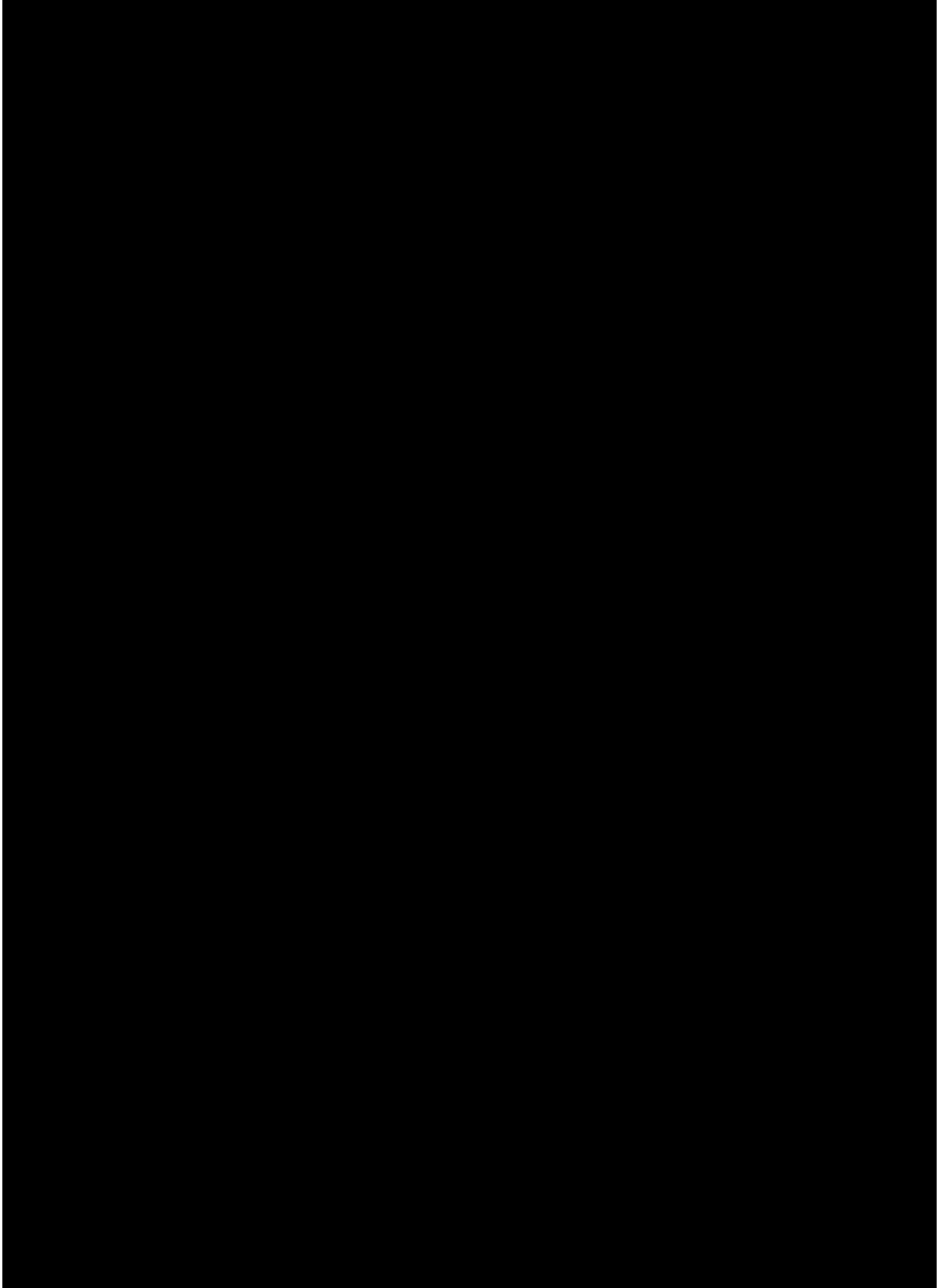


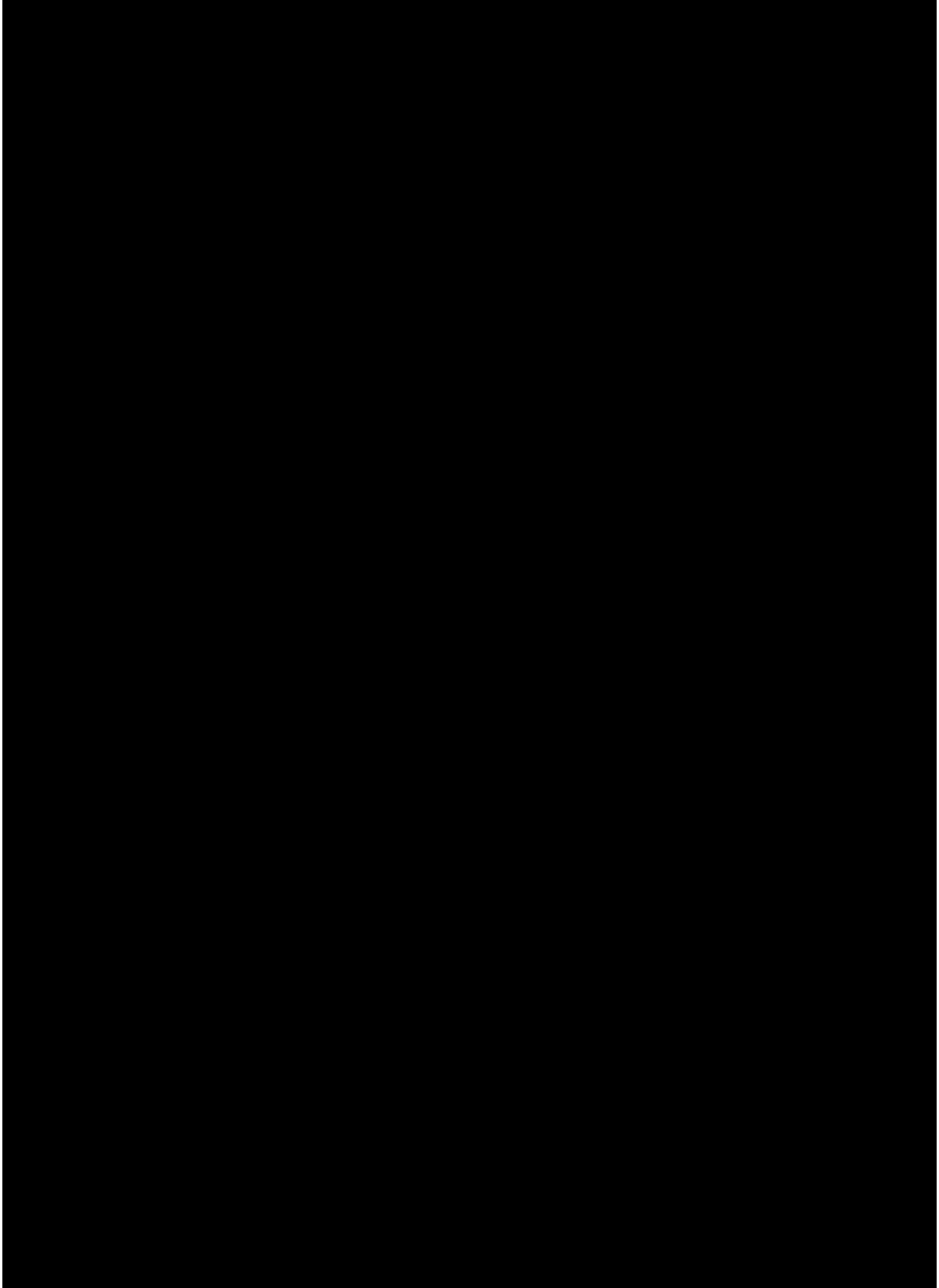


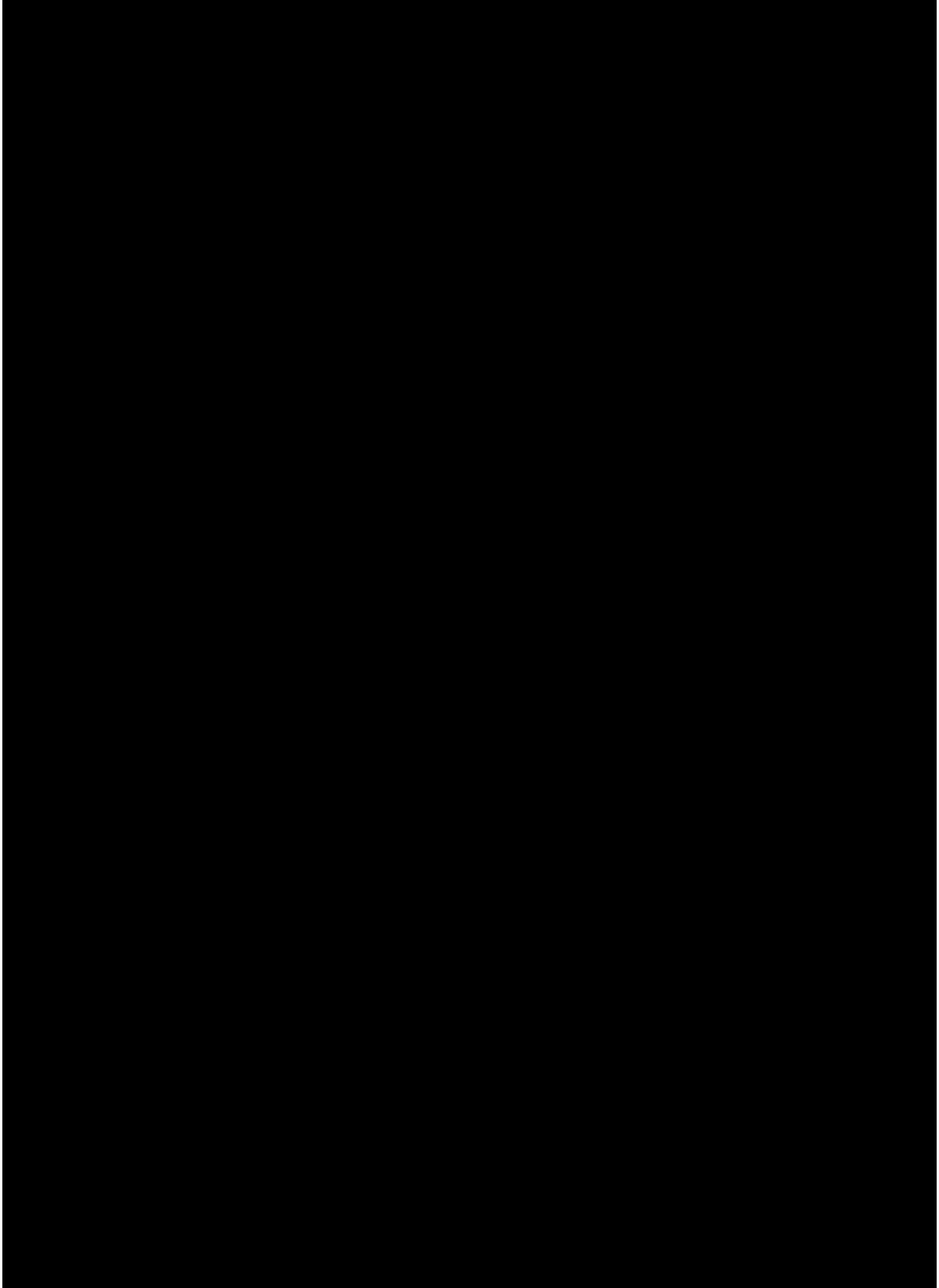


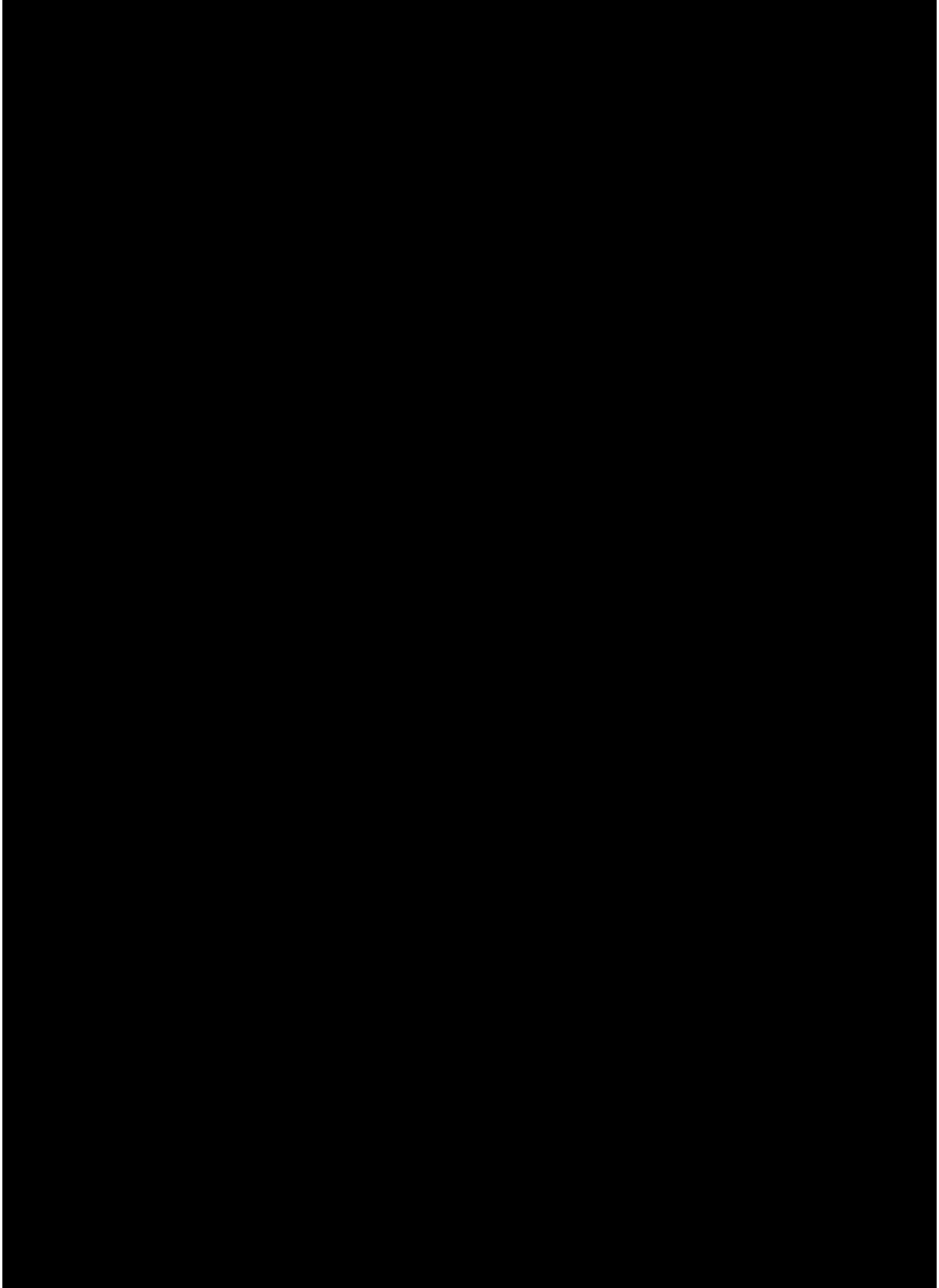


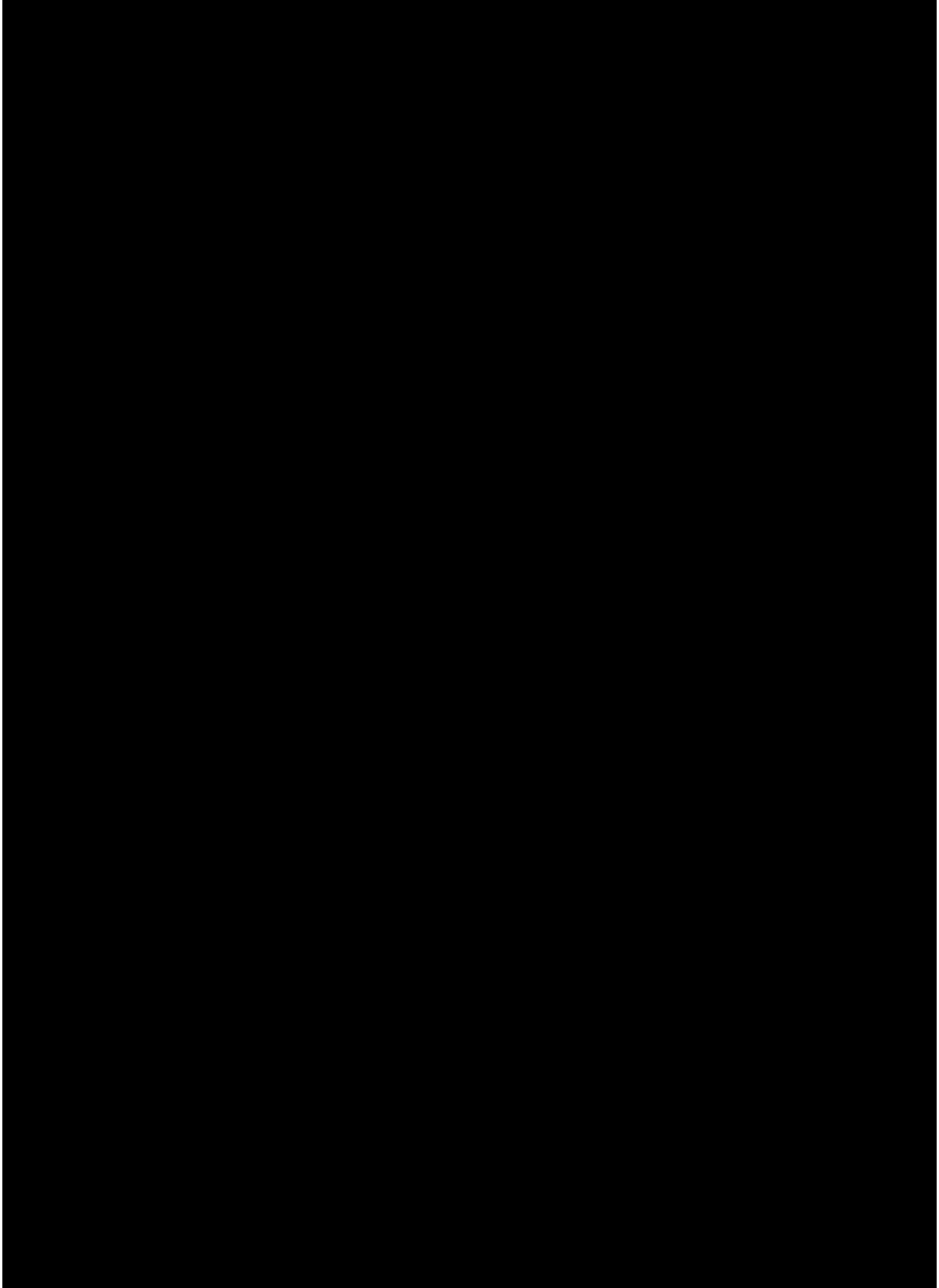


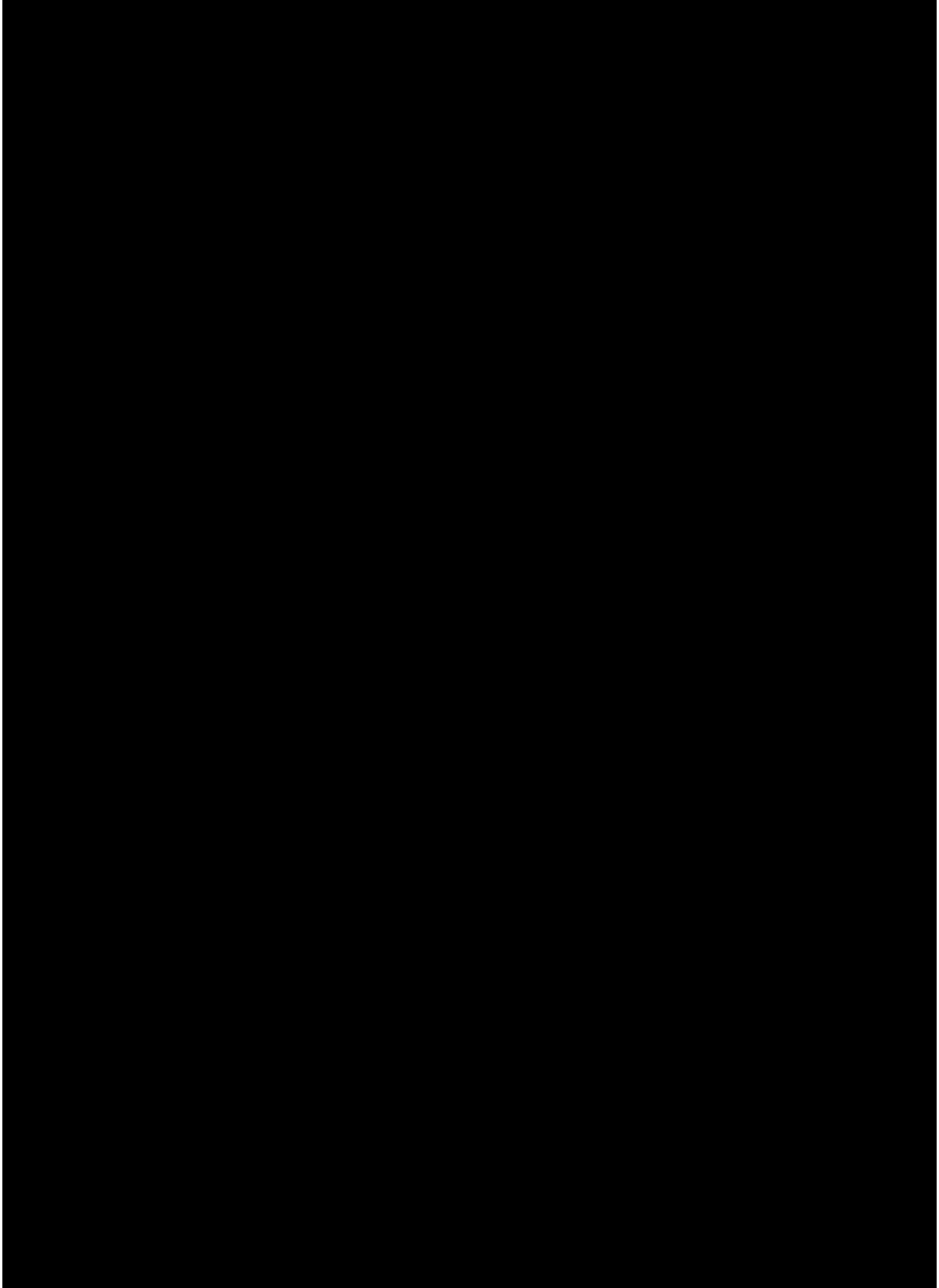


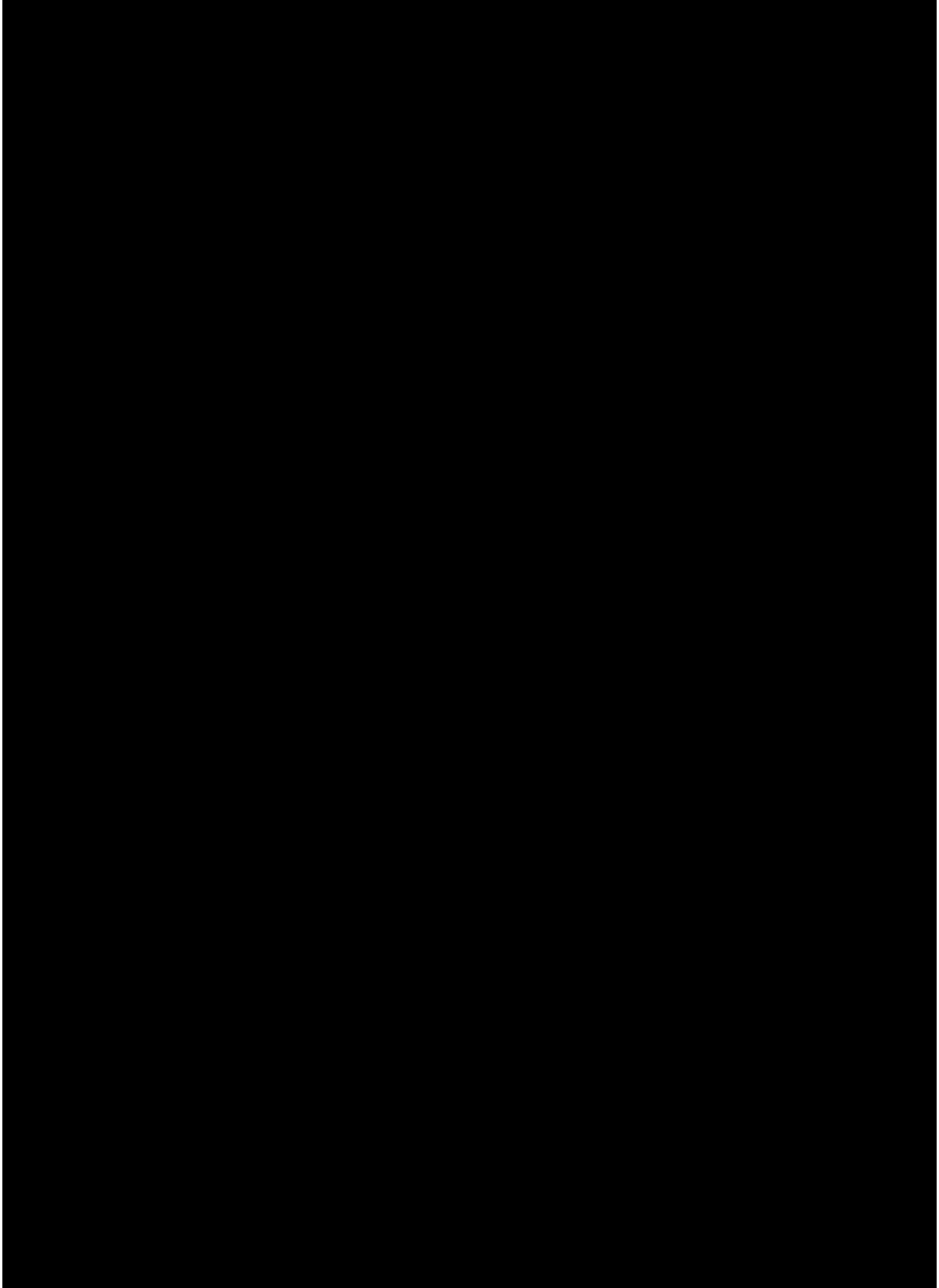


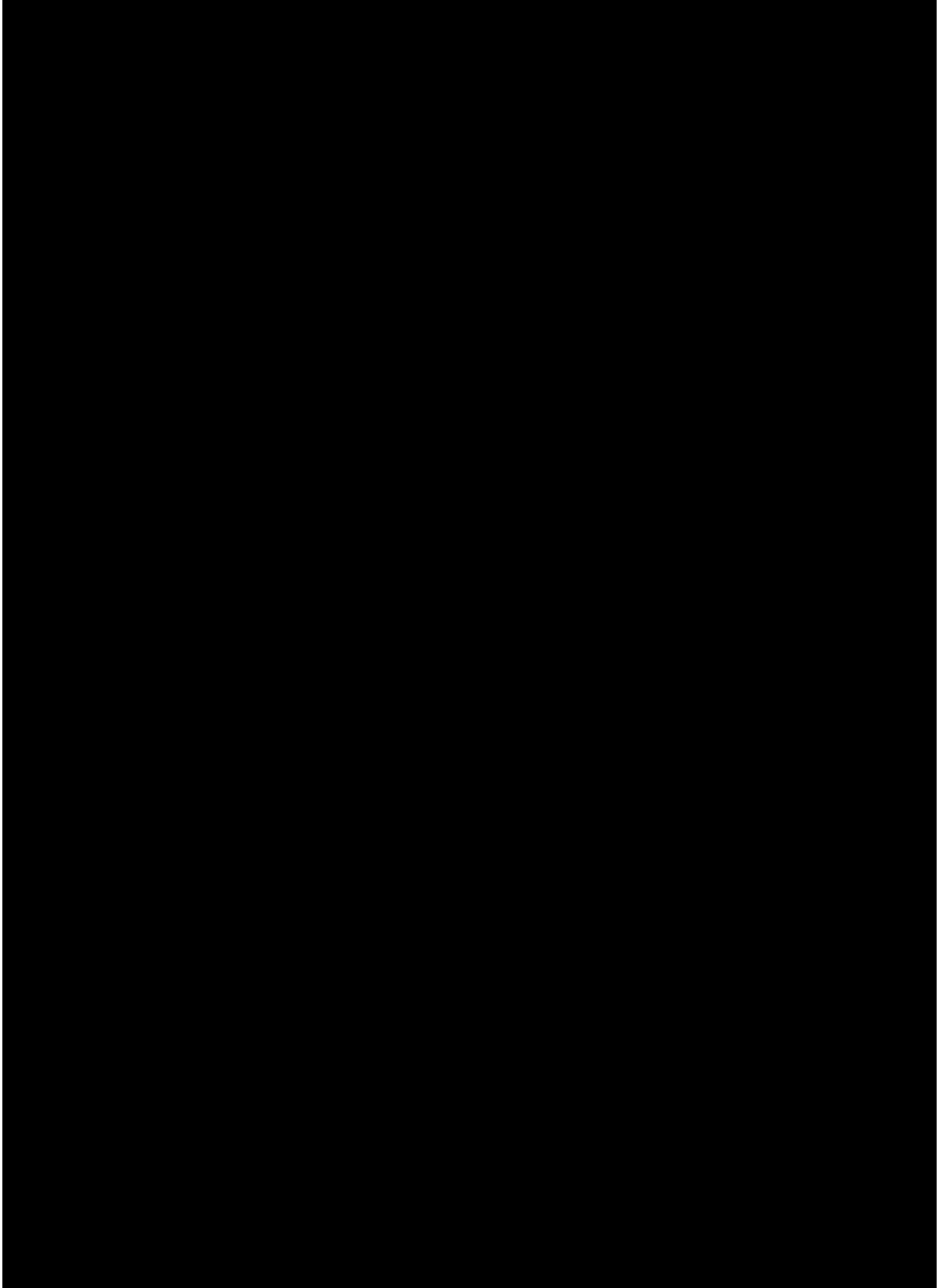


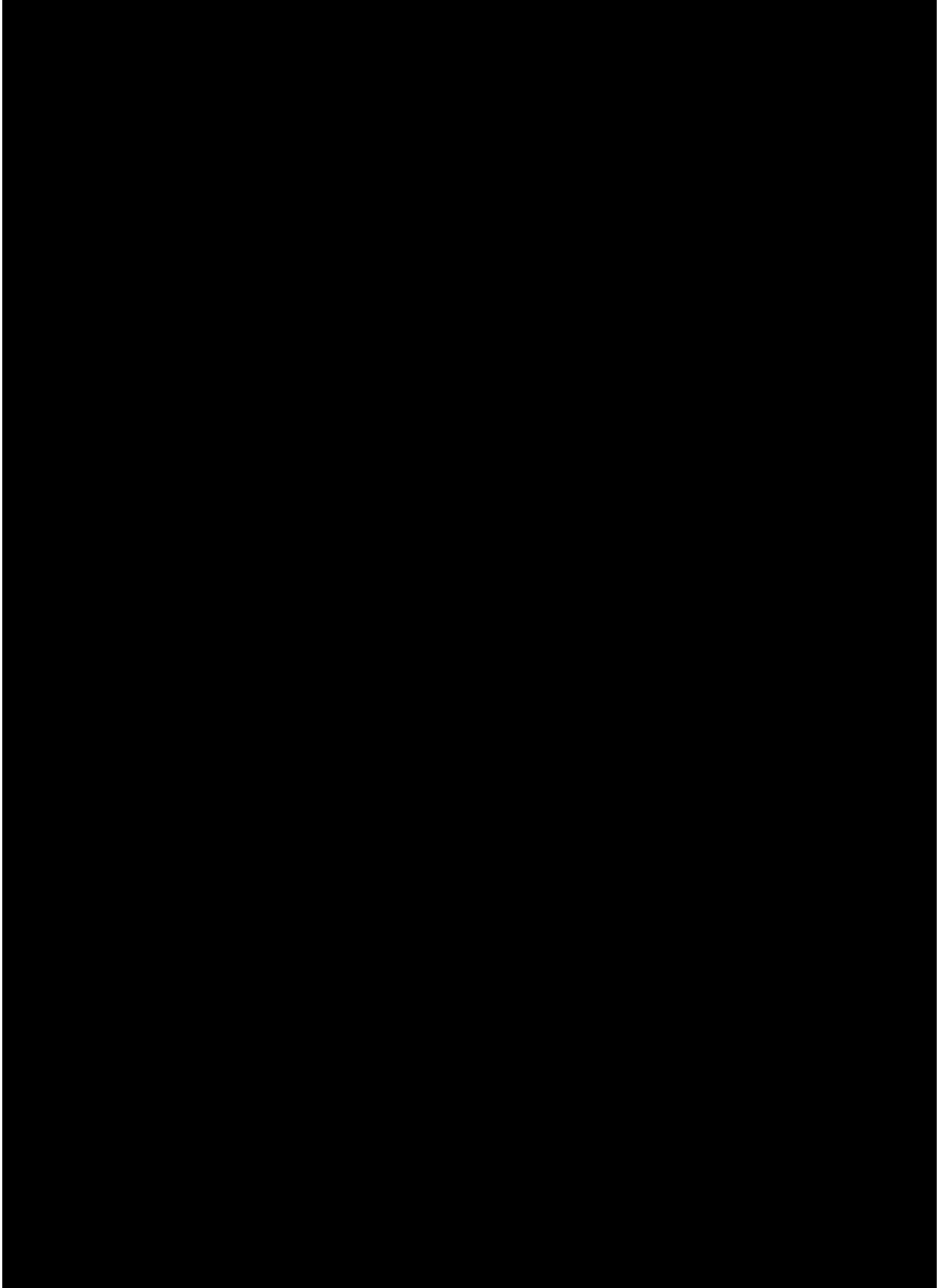


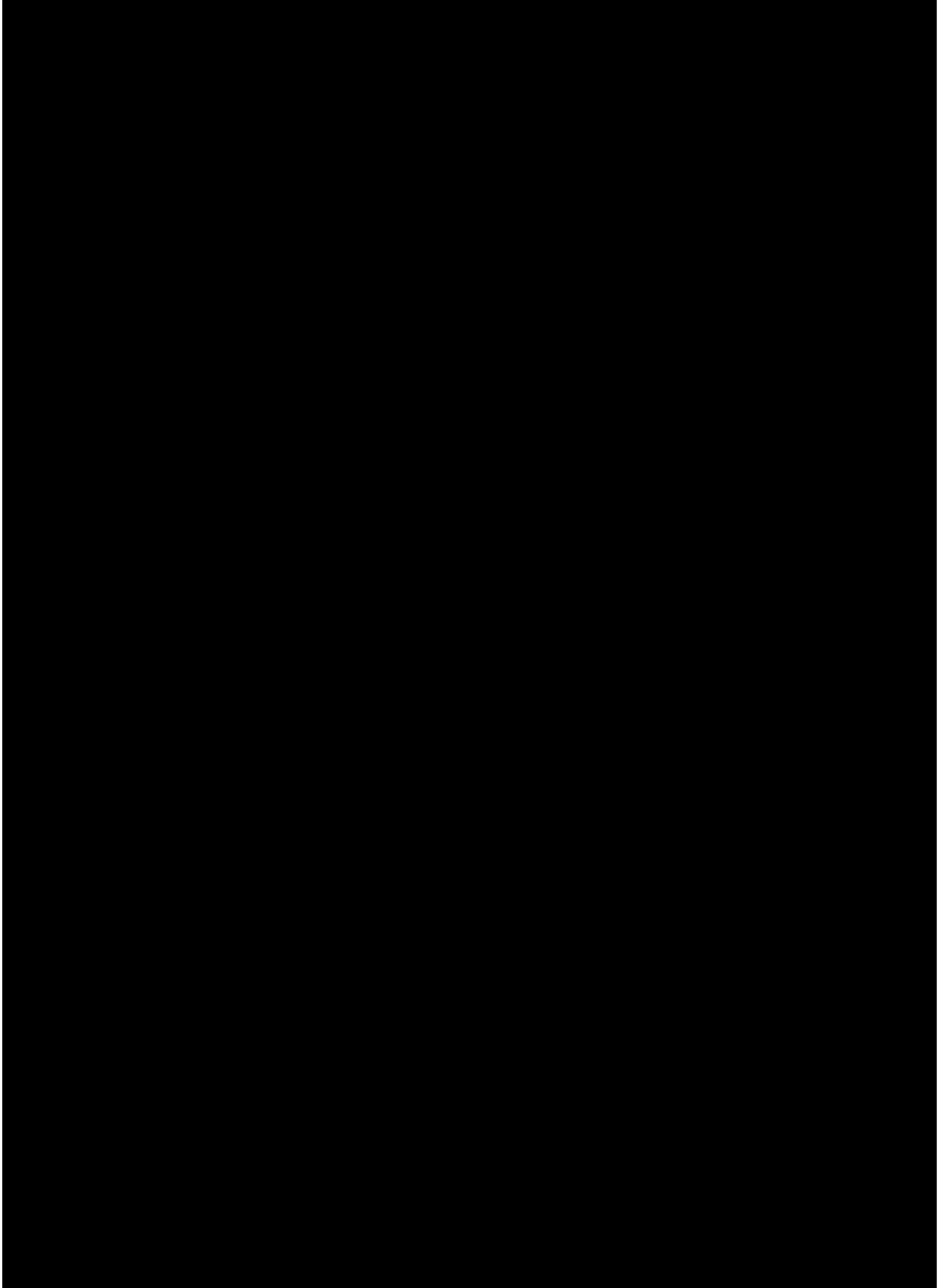


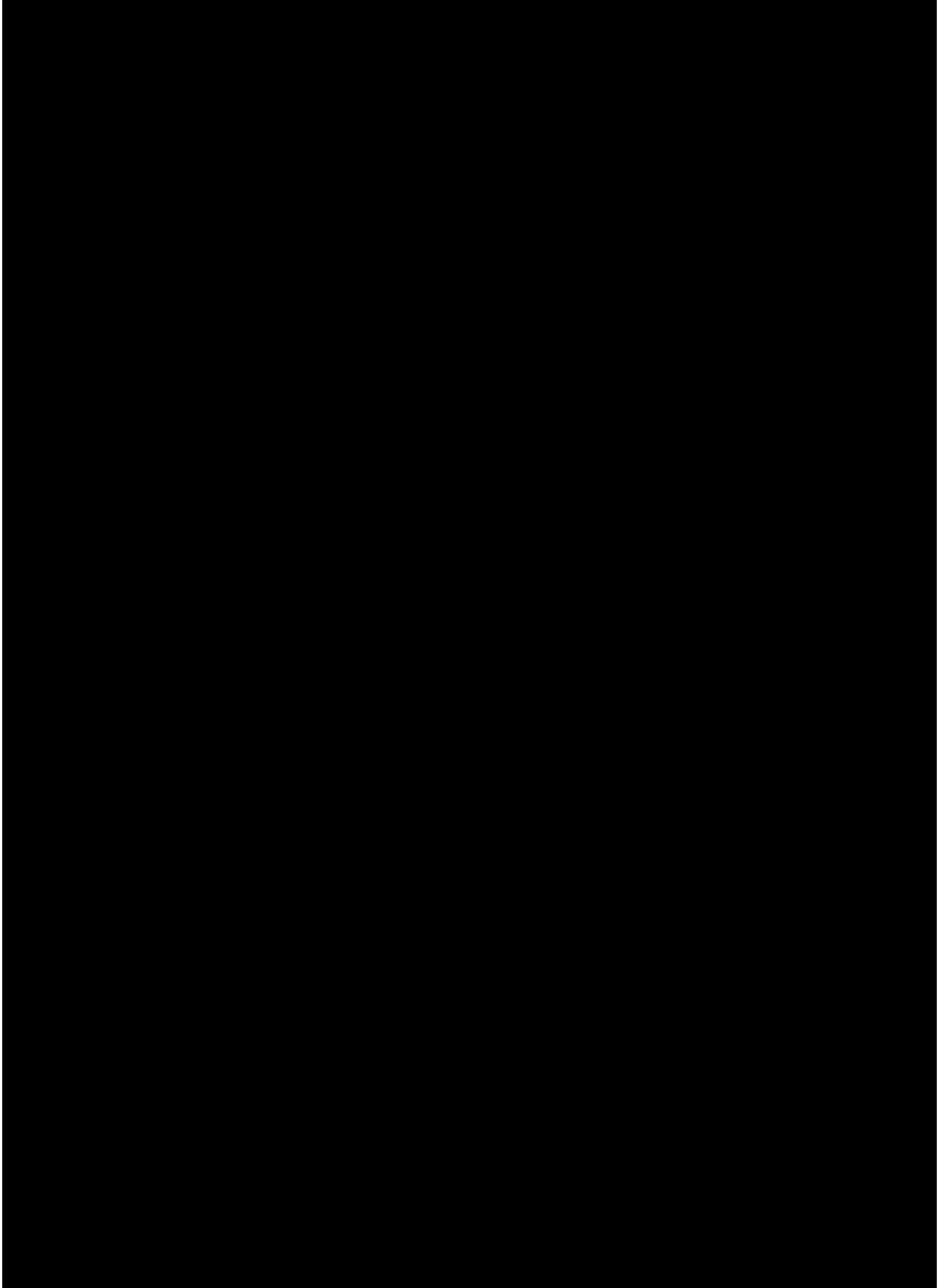


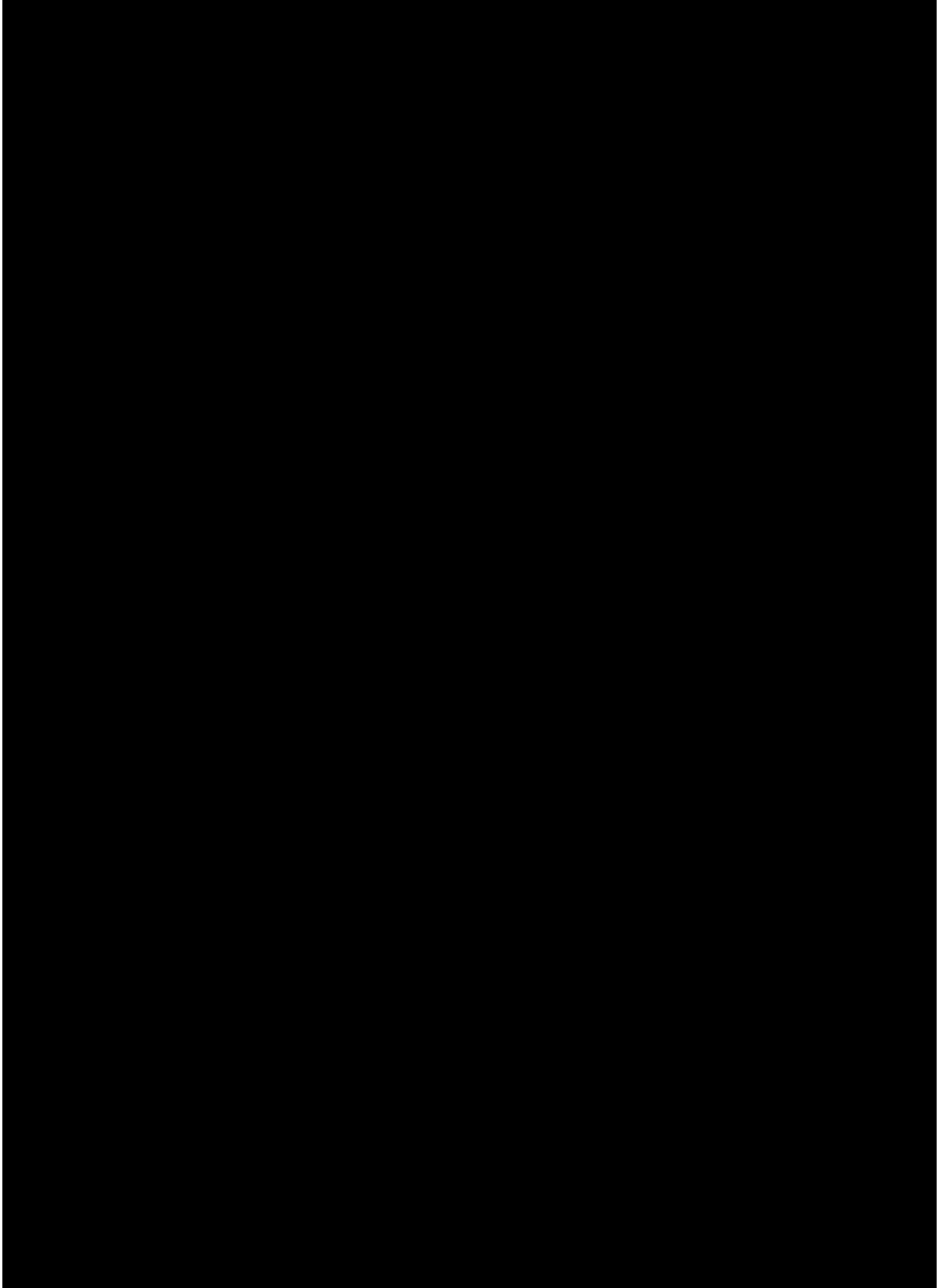


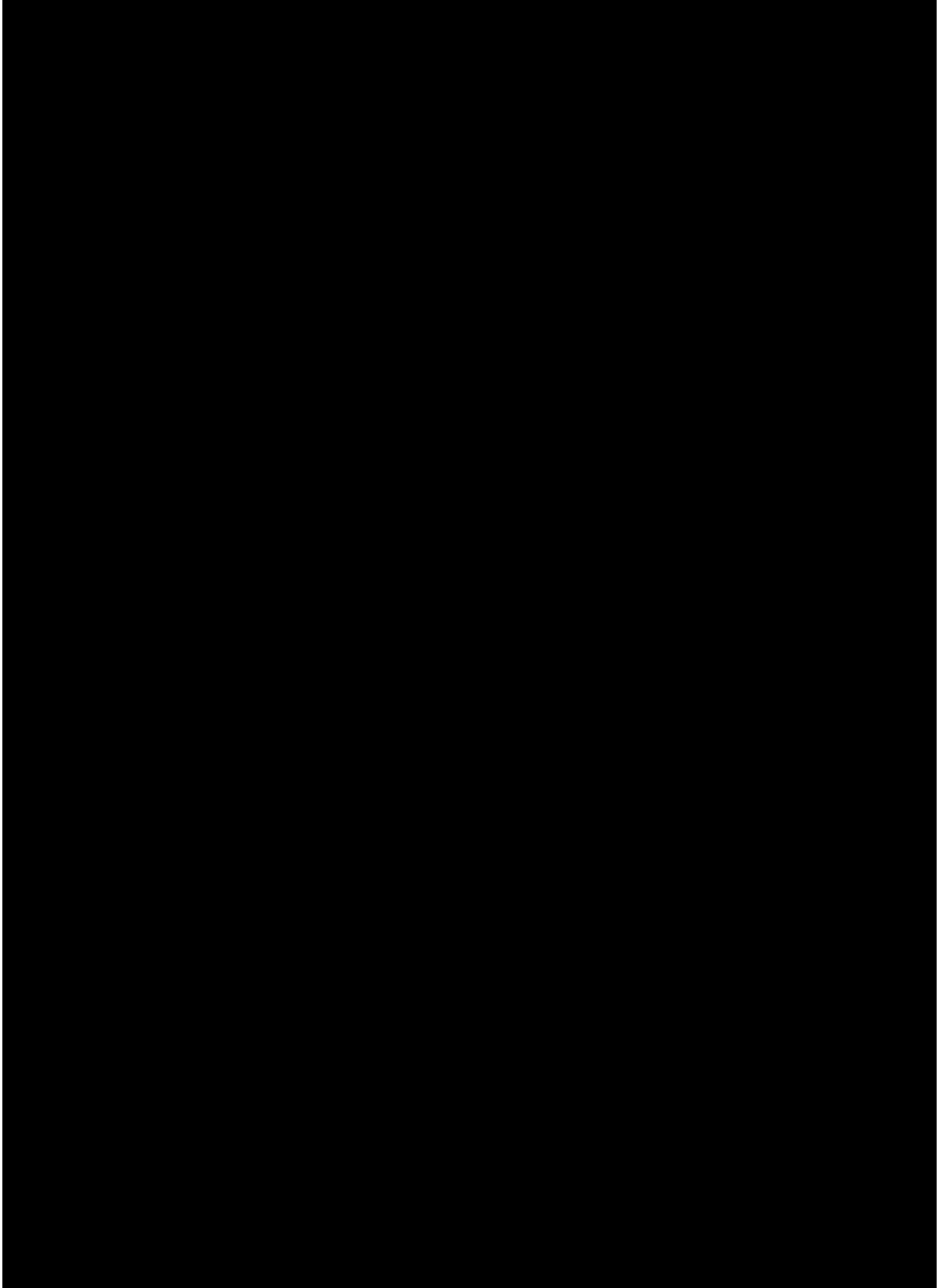


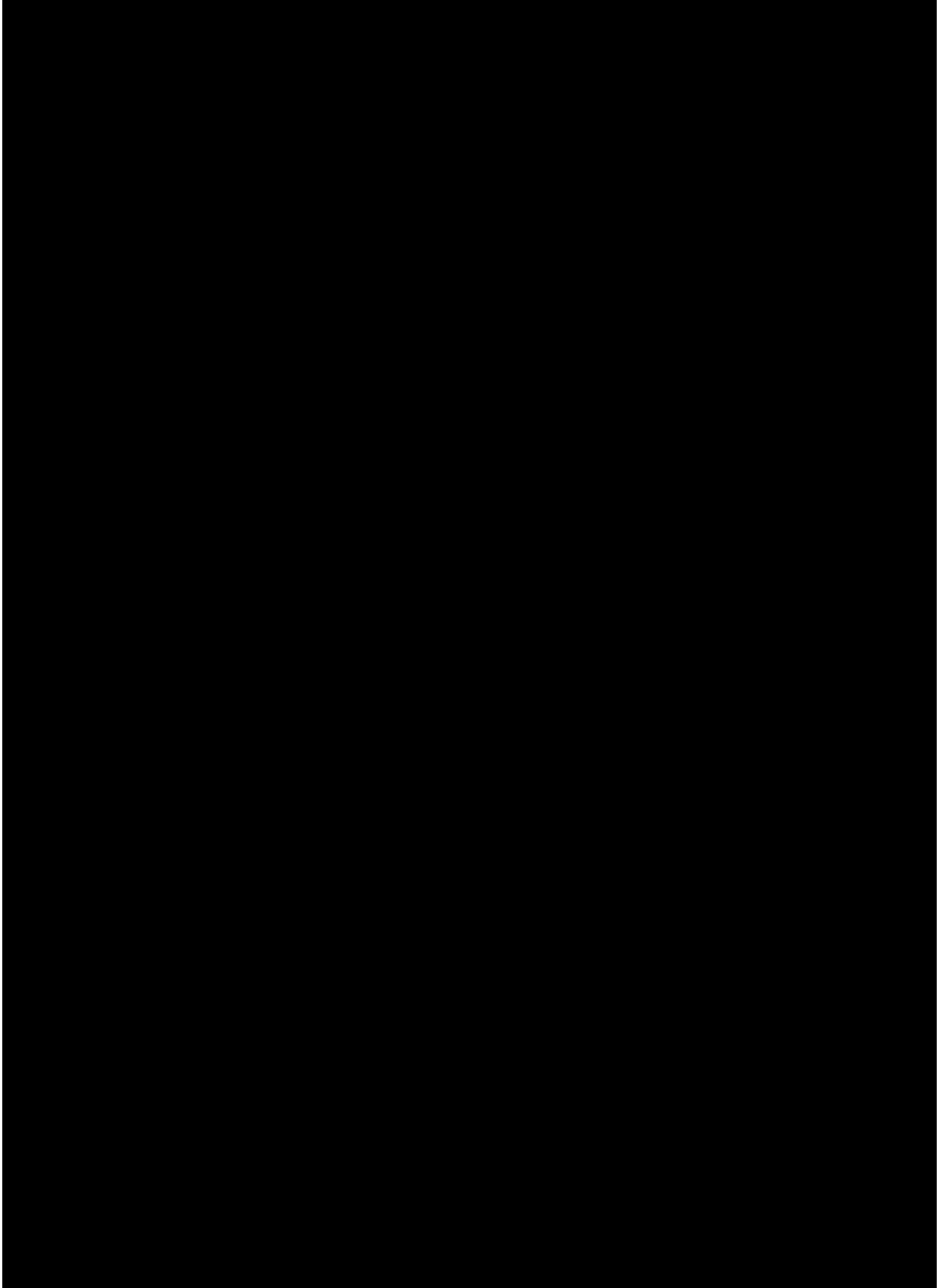












A *habitat* in the ecological sense is the totality of the physical and chemical factors that constitute the general environment. A system consisting of biotic and abiotic components is known as ecosystem. All these components in ecosystem are inter related and interact with each other. Different types of ecosystems exist with varying ranges of environmental conditions where various plants and animal species have got adapted through evolution. This phenomenon is known as *ecological adaptation*.

Types of Ecosystems

Ecosystems are of two major types: *terrestrial* and *aquatic*. Terrestrial ecosystem can be further be classified into '*biomes*'. A *biome* is a plant and animal community that covers a large geographical area. The boundaries of different biomes on land are determined mainly by climate. Therefore, a biome can be defined as the total assemblage of plant and animal species interacting within specific conditions. These include rainfall, temperature, humidity and soil conditions. Some of the major biomes of the world are: *forest, grassland, desert and tundra biomes*. Aquatic ecosystems can be classed as marine and freshwater ecosystems. Marine ecosystem includes the oceans, estuaries and coral reefs. Freshwater

ecosystem includes lakes, ponds, streams, marshes and bogs.

Structure and Functions of Ecosystems

The structure of an ecosystem involves a description of the available plant and animal species. From a structural point of view, all ecosystems consist of abiotic and biotic factors. *Abiotic factors* include rainfall, temperature, sunlight, atmospheric humidity, soil conditions, inorganic substances (carbon dioxide, water, nitrogen, calcium, phosphorus, potassium, etc.). *Biotic factors* include the producers, the consumers (primary, secondary, tertiary) and the decomposers. The *producers* include all the green plants, which manufacture their own food through photosynthesis. The *primary consumers* include herbivorous animals like deer, goats, mice and all plant-eating animals. The *carnivores* include all the flesh-eating animals like snakes, tigers and lions. Certain carnivores that feed also on carnivores are known as top carnivores like hawks and mongooses. *Decomposers* are those that feed on dead organisms (for example, scavengers like vultures and crows), and further breaking down of the dead matter by other decomposing agents like bacteria and various micro-organisms.

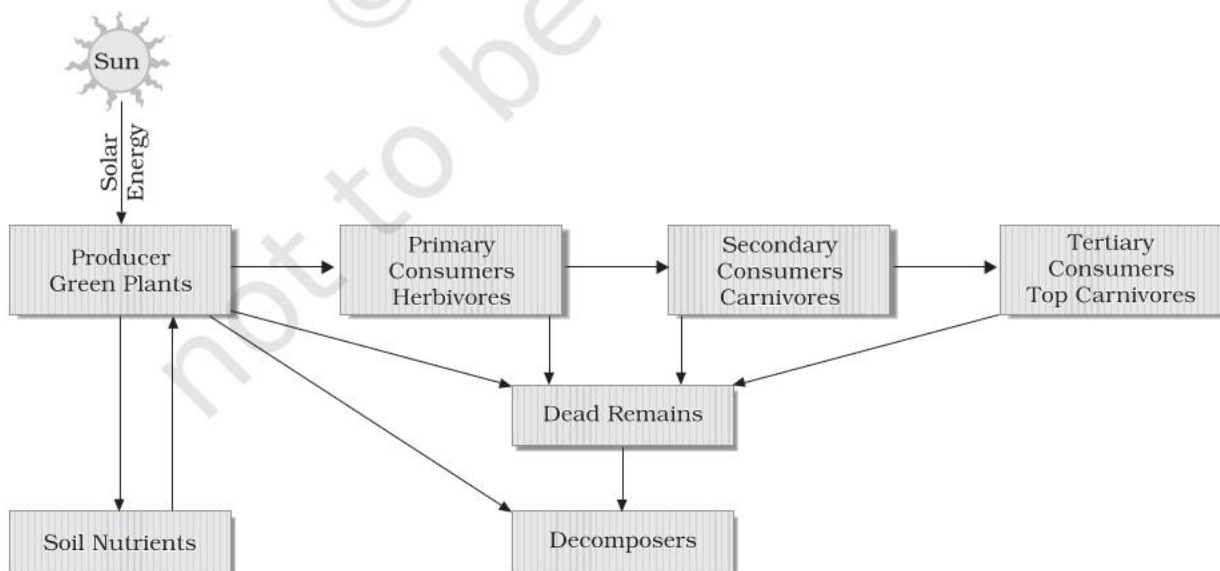


Figure 15.1 : Structure and functions of ecosystems

