

Start with a Book: Space Rangers

Constellation Light Show



Introduction

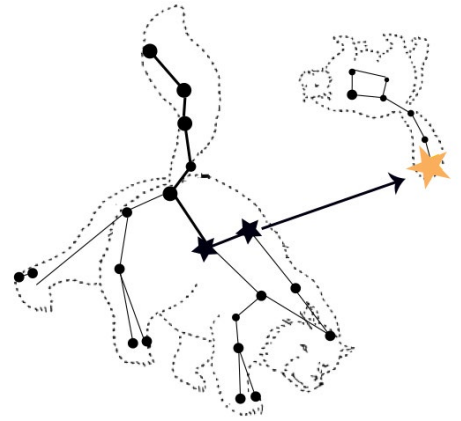
A constellation is a group of stars that make up an imaginary shape in the night sky.

In ancient times, people saw patterns of stars in the night sky that seemed to make recognizable shapes. Some of them are named after mythical heroes like Hercules and Orion the Hunter. Other star patterns are named after animals, like Ursa Major — the big bear.

The star patterns became a way to preserve stories, like the legend of Perseus rescuing the princess Andromeda from a sea monster named Cetus.

As astronomers began mapping the night sky, these star patterns were included in the maps and called “constellations.” There are 88 official constellations, according to the International Astronomical Union. At different times of the year, different constellations can be seen in the sky.

Sailors have used constellations to help with navigation for thousands of years. It’s pretty easy to spot Polaris (North Star) once you’ve found Ursa Minor (Little Dipper).



Get kids thinking

- Have you ever looked for the Little Dipper and the North Star in the night sky?
- Can you guess why we see different constellations in the summer night sky than we see in the fall, winter, or spring? In the summer, we can see Hercules the Hero but we can't see Orion the Hunter (we see Orion in the winter sky).
- Do you know any stories about constellations, like the stories of Hercules, Orion the Hunter, or Pegasus the winged horse?





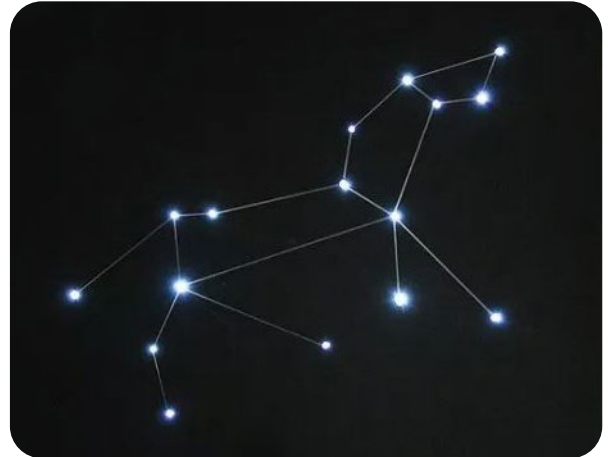
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Constellation Light Show

Supplies

- Constellation card templates (provided)
- Black construction paper (8-1/2 x 11), one sheet for each child
- Sharpened pencils or toothpicks
- Tape
- Flashlight
- Pieces of cardboard

This activity needs a darkened room



Let's get started!

In this activity, kids will prepare a constellation for a group light show in the dark.

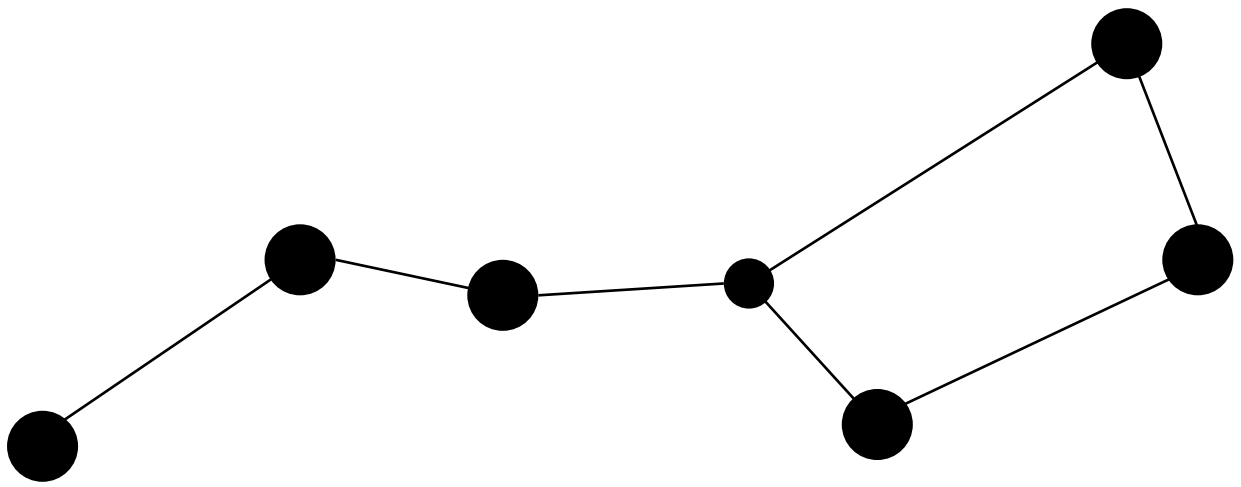
Print out enough copies of the individual constellation pages so that the kids will have some options when they choose their constellation. The templates can be found after page 2.

Ask the kids to choose a favorite constellation. Show them how to tape their constellation template to a sheet of black paper, and then put the taped constellation on top of a piece of cardboard to protect the surface you are working on when you poke holes in the paper.

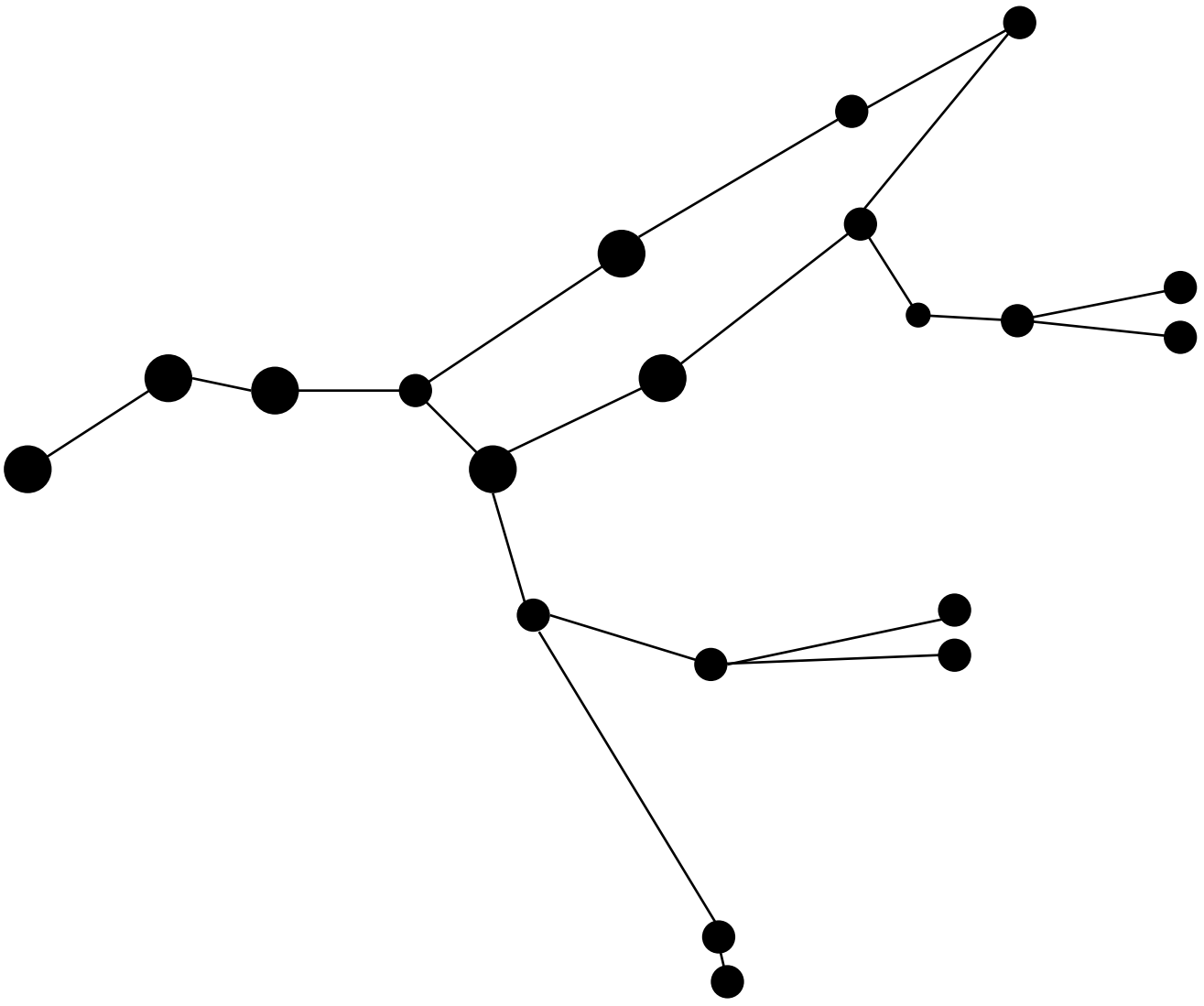
Tell the kids that each of the dots on the constellation sheet represents a star. Using a small pointed object (a pen or toothpick works well), show them how to poke holes in the dots for each star.

Then gather all the kids together in the room for the starry night show! Turn off all the lights in the room, hold your paper up to the wall and shine the flashlight behind it. Everyone will see the stars of your constellation light up on the wall. Give each child a turn to show their constellation to the group.

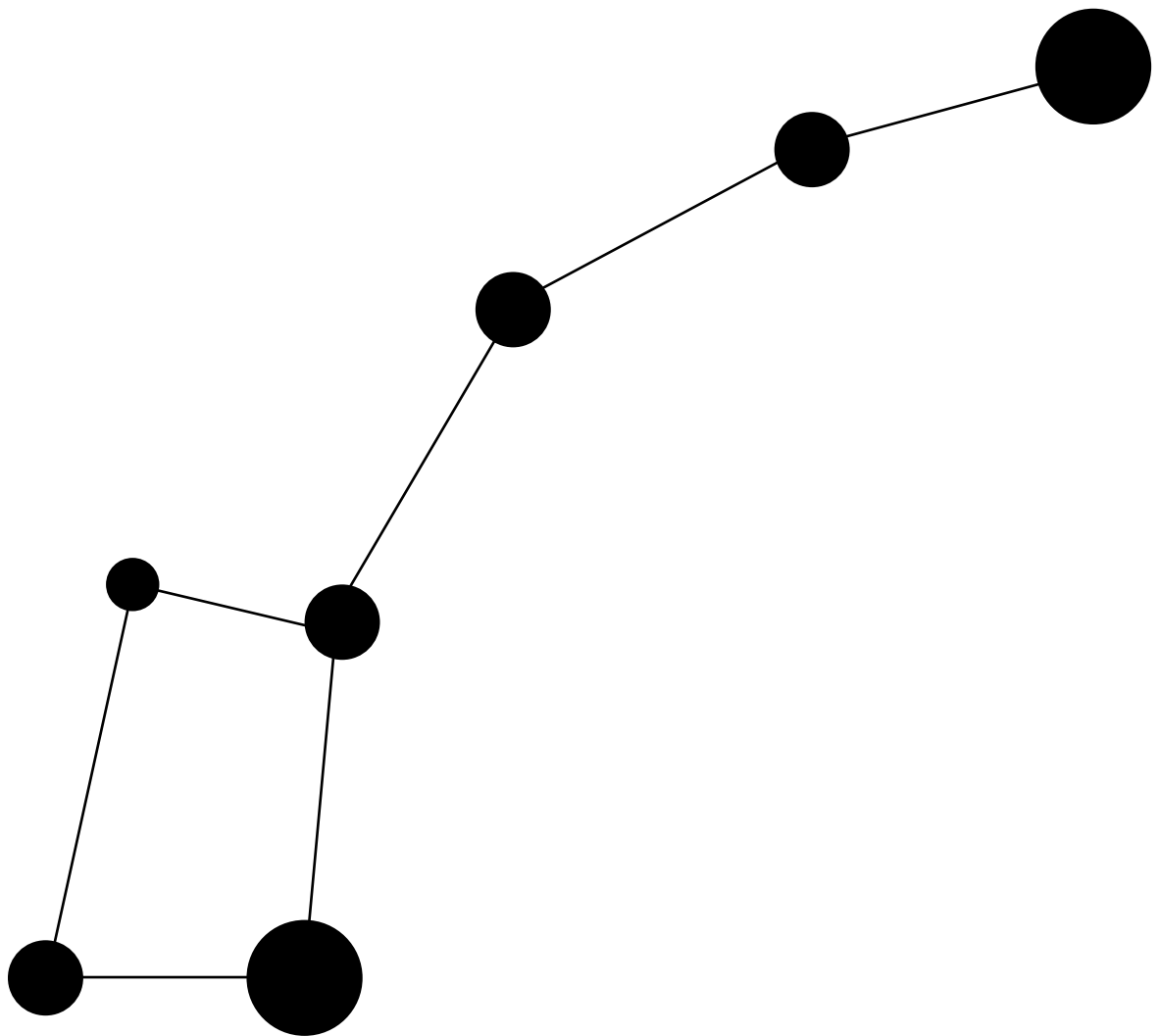




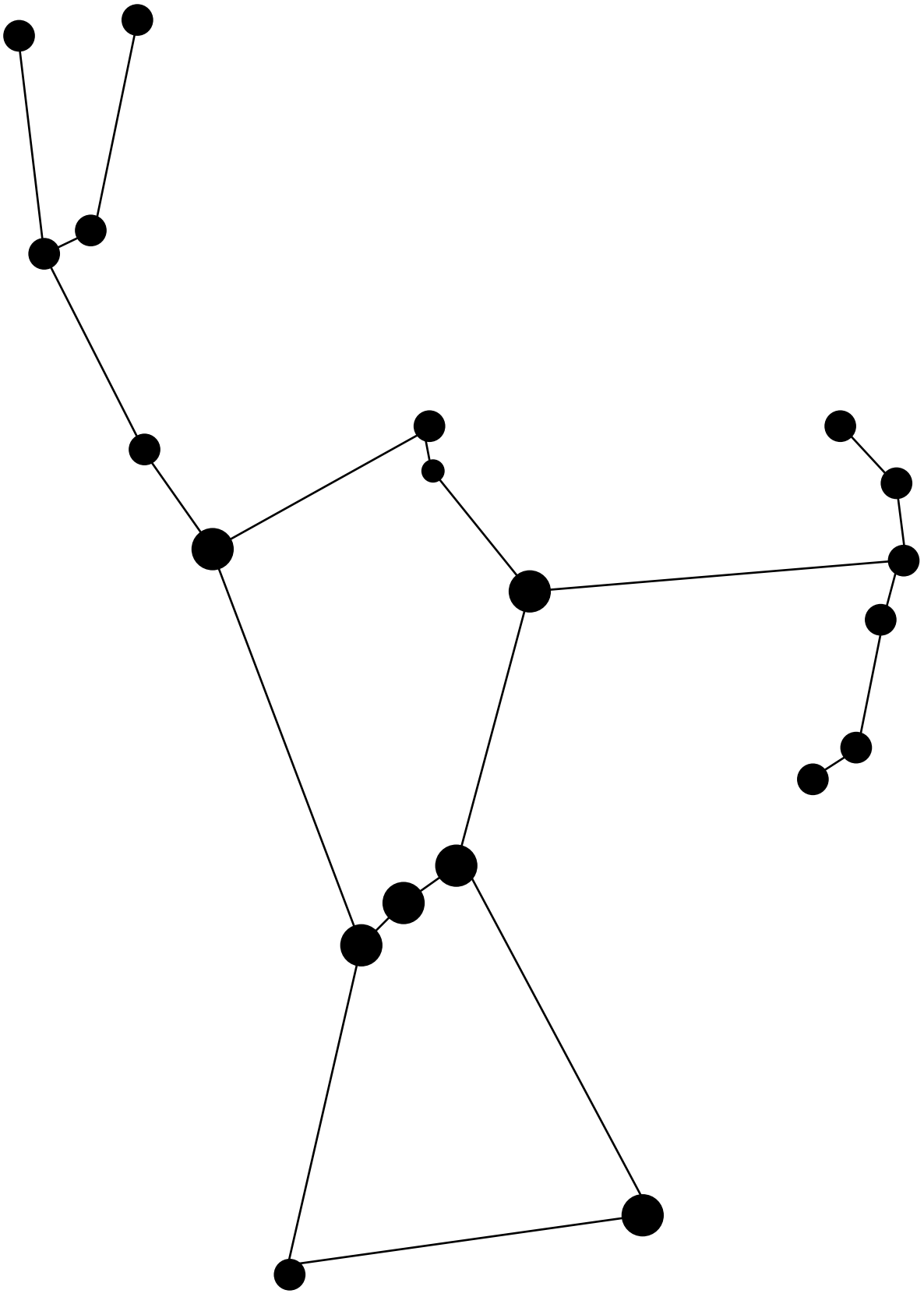
Big Dipper



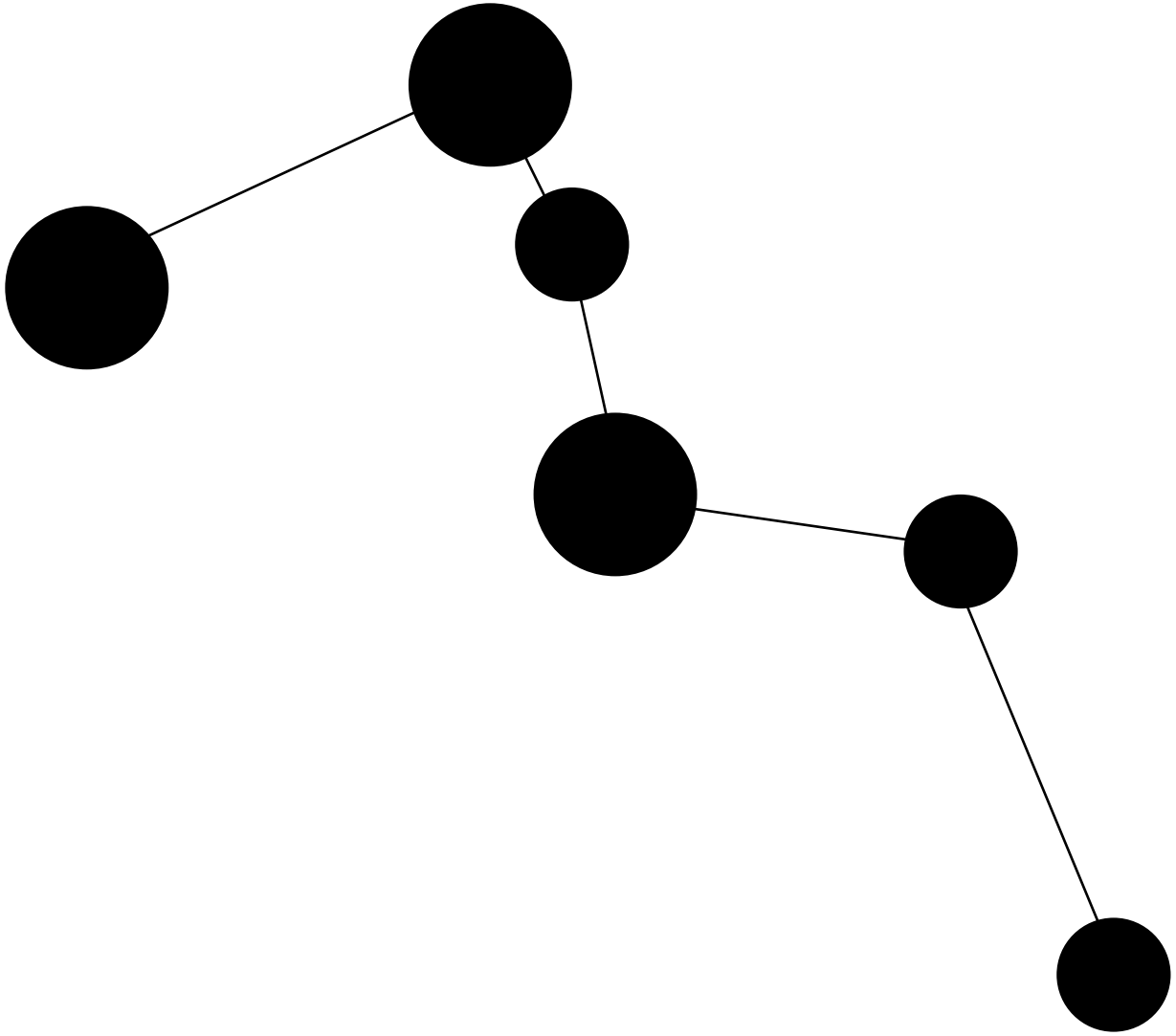
Ursa Major



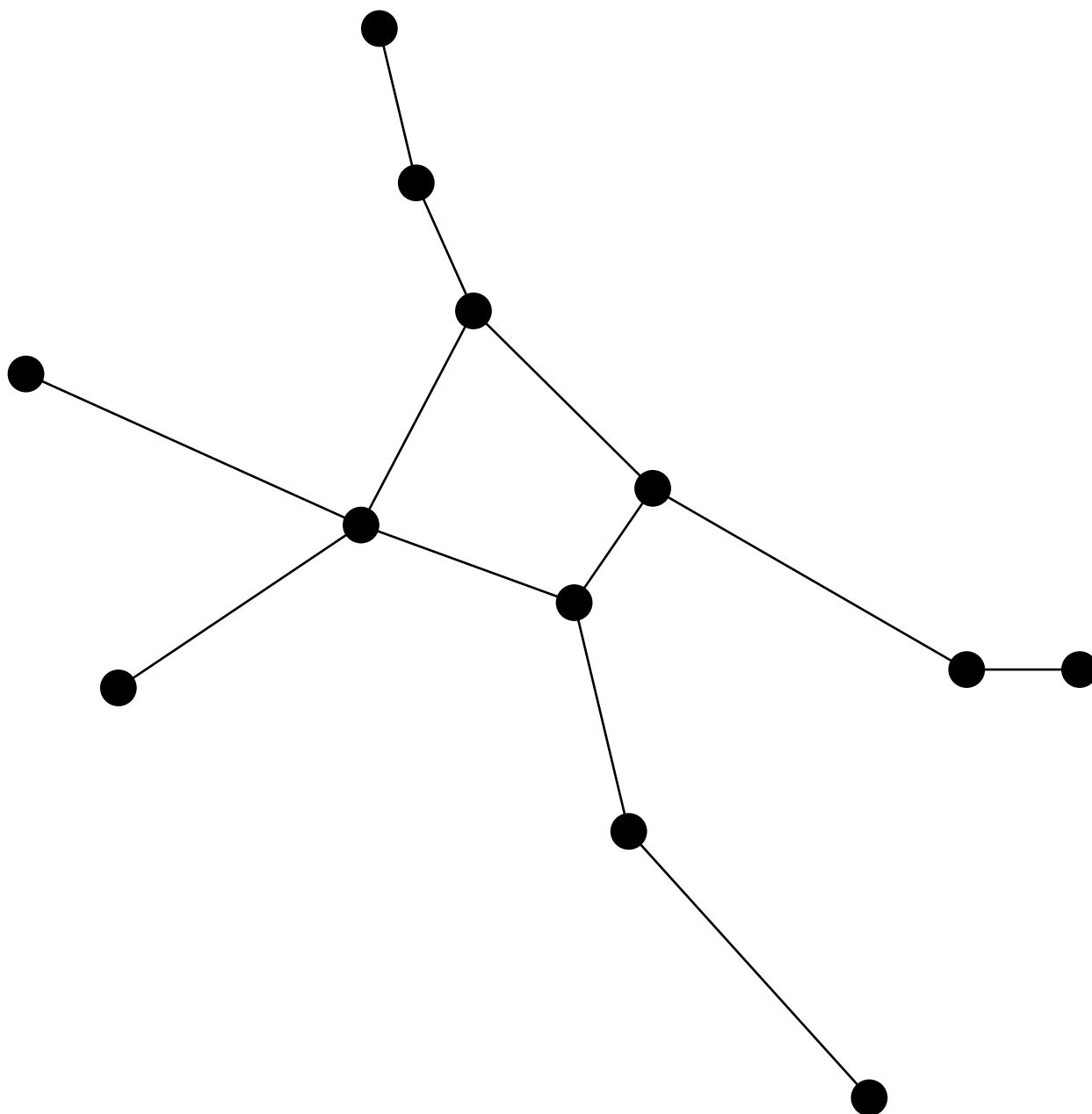
Little Dipper (Ursa Minor)



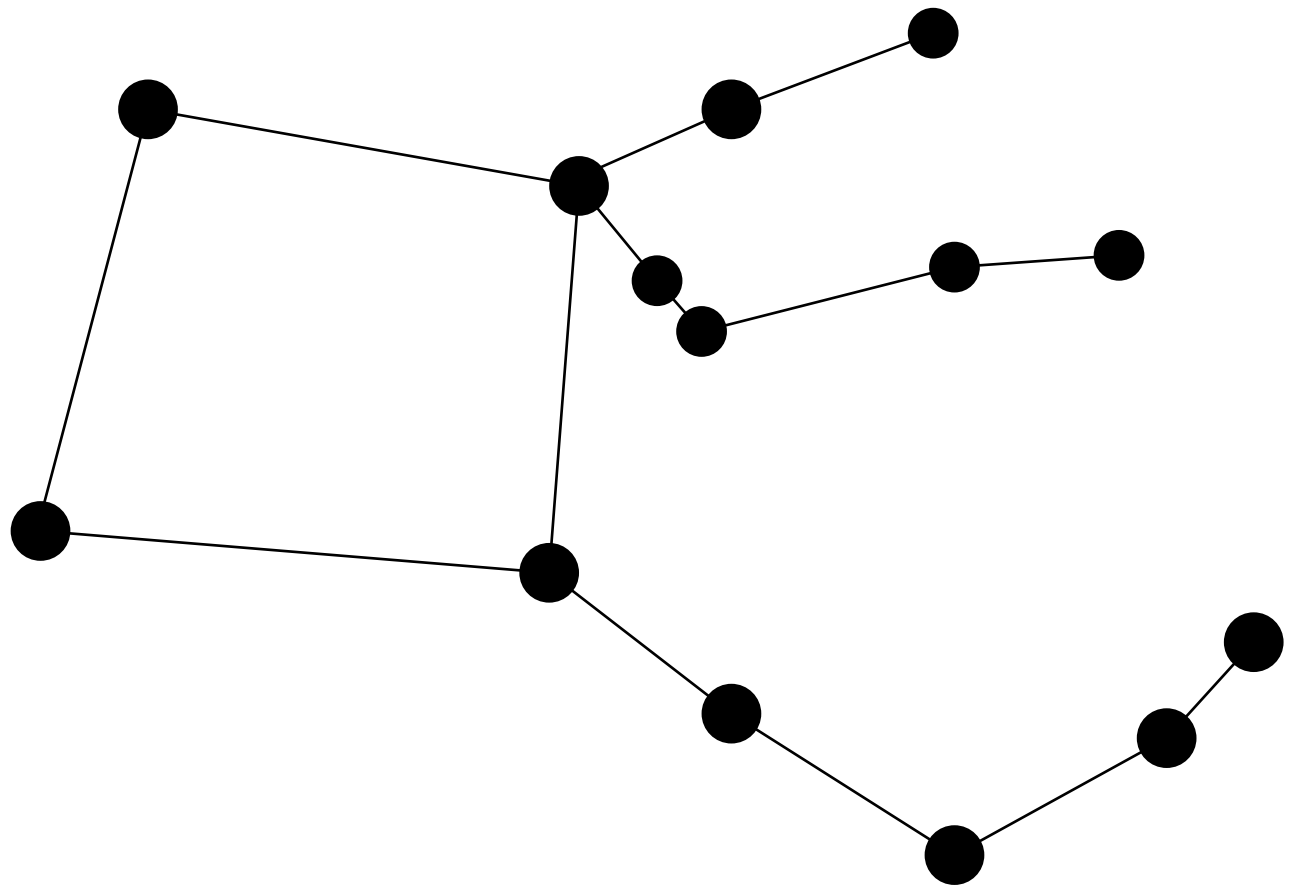
Orion, The Hunter



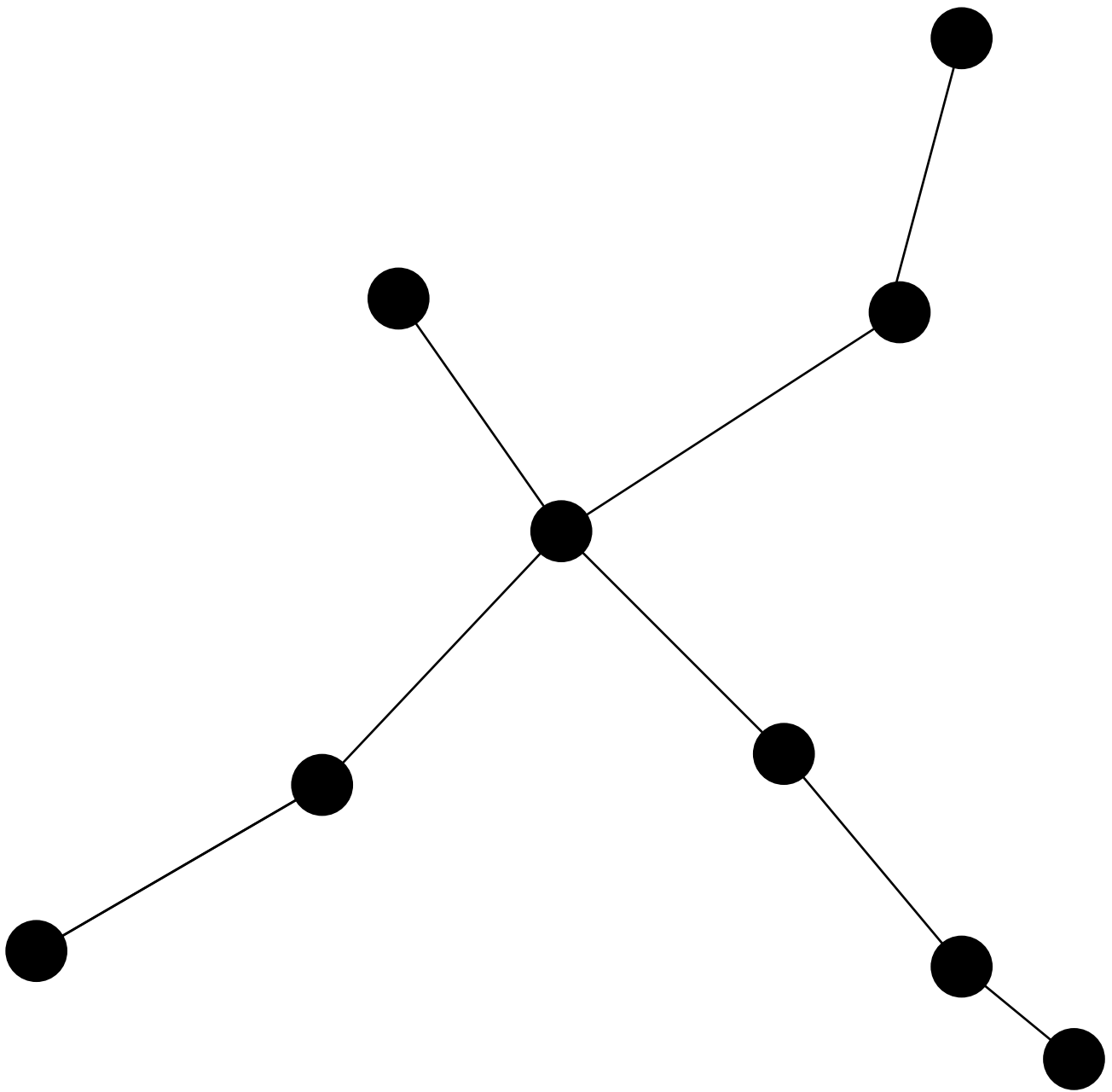
Cassiopeia, The Queen



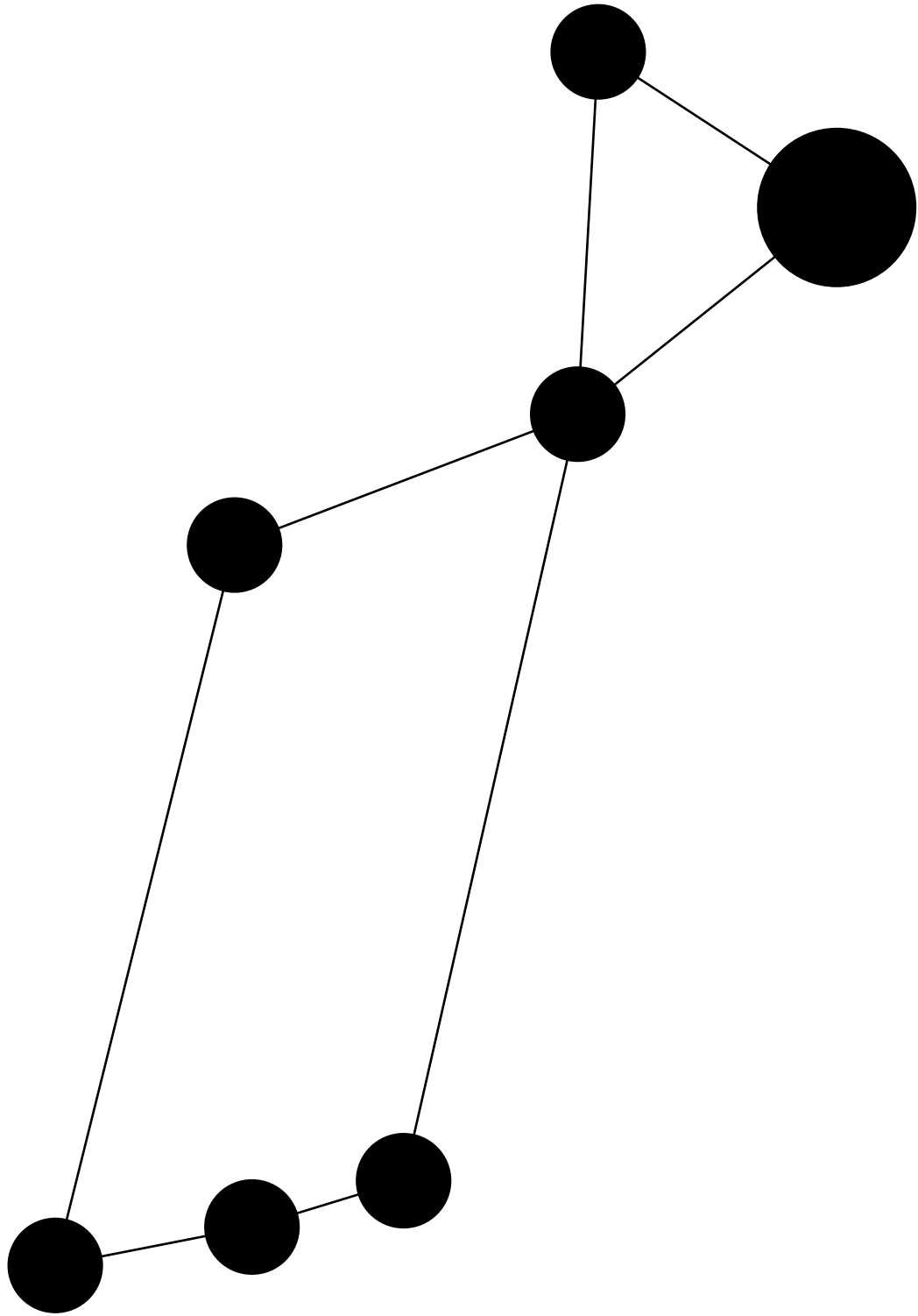
Hercules, The Hero



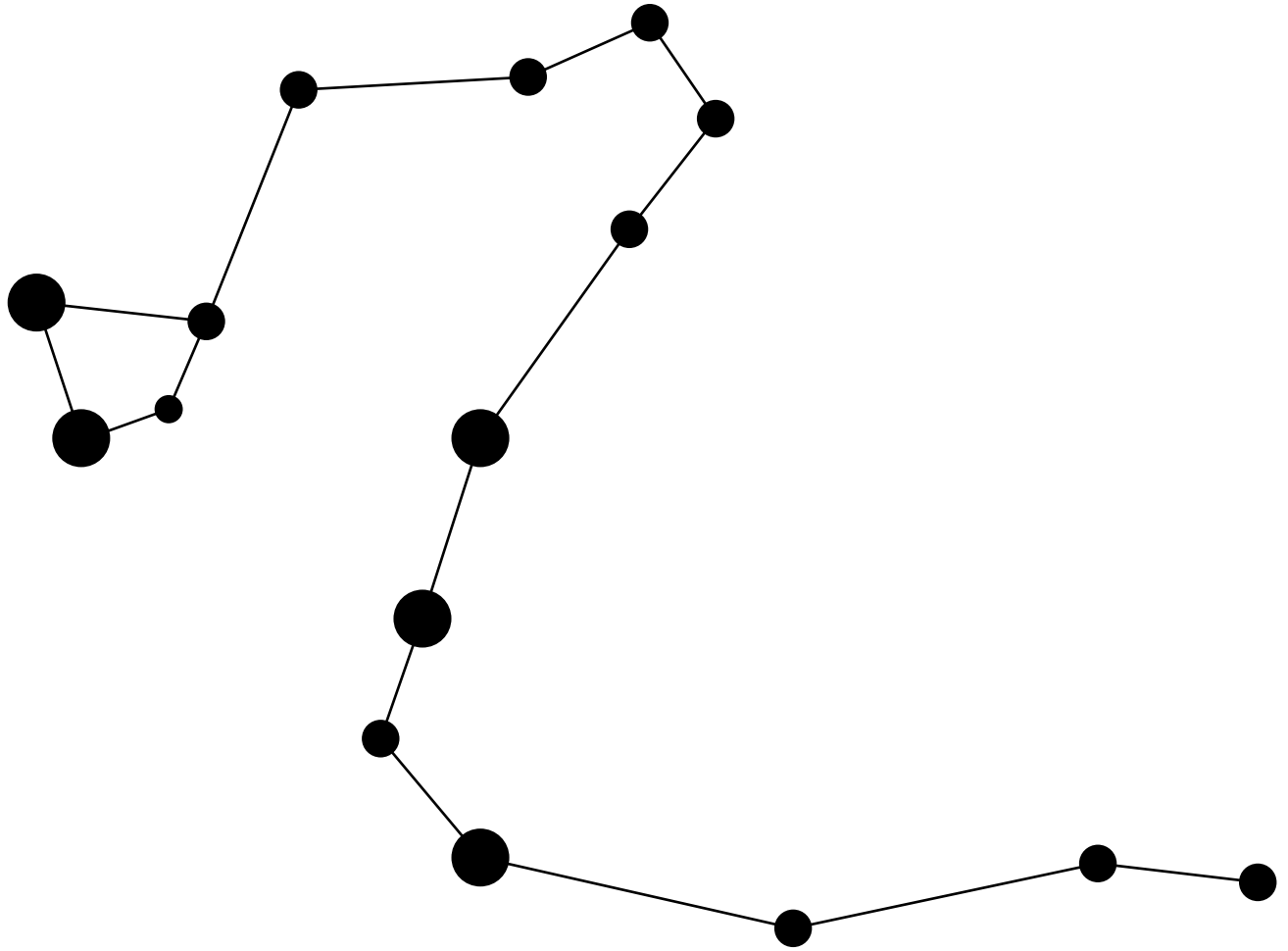
Pegasus, The Winged Horse



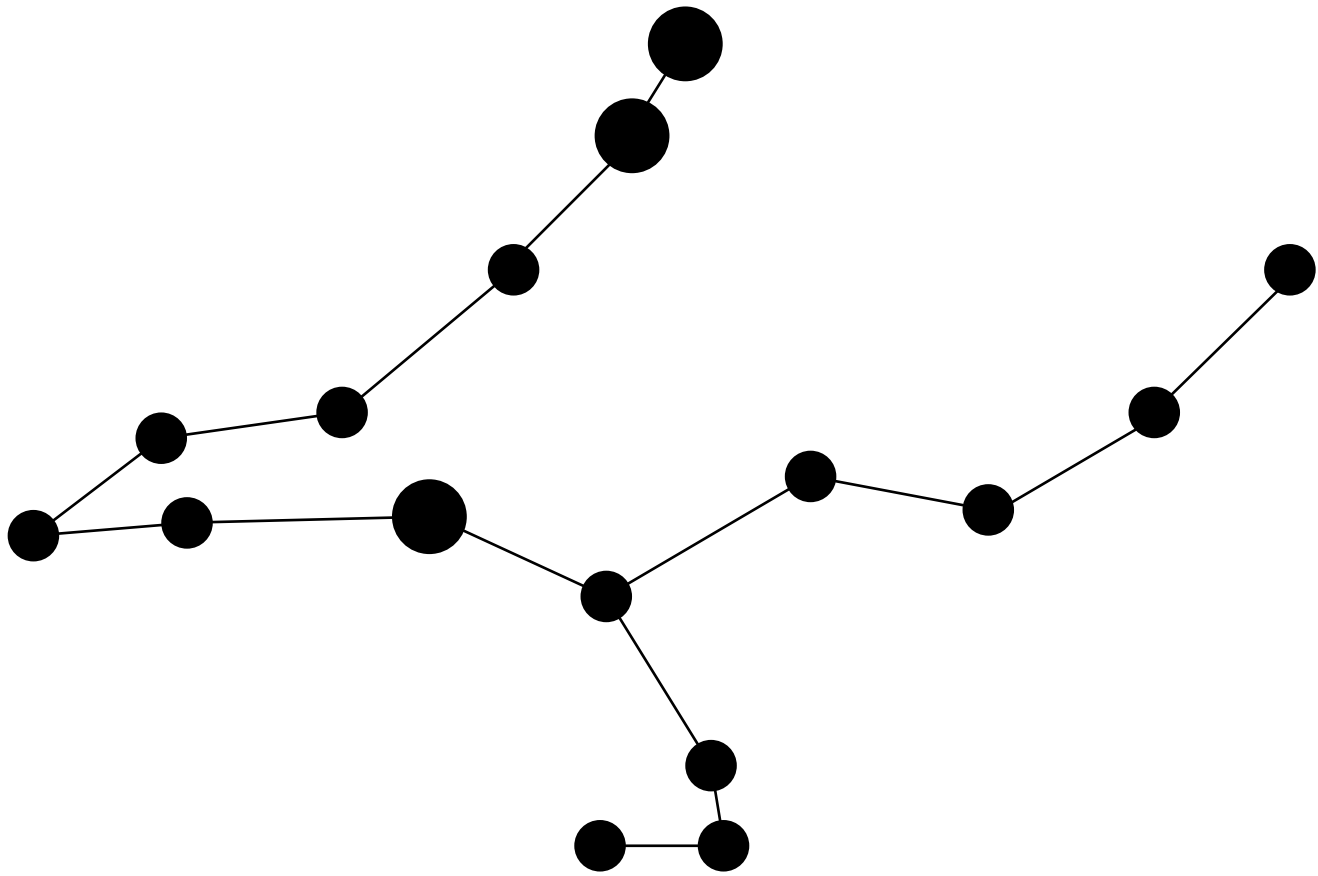
Cygnus, The Swan



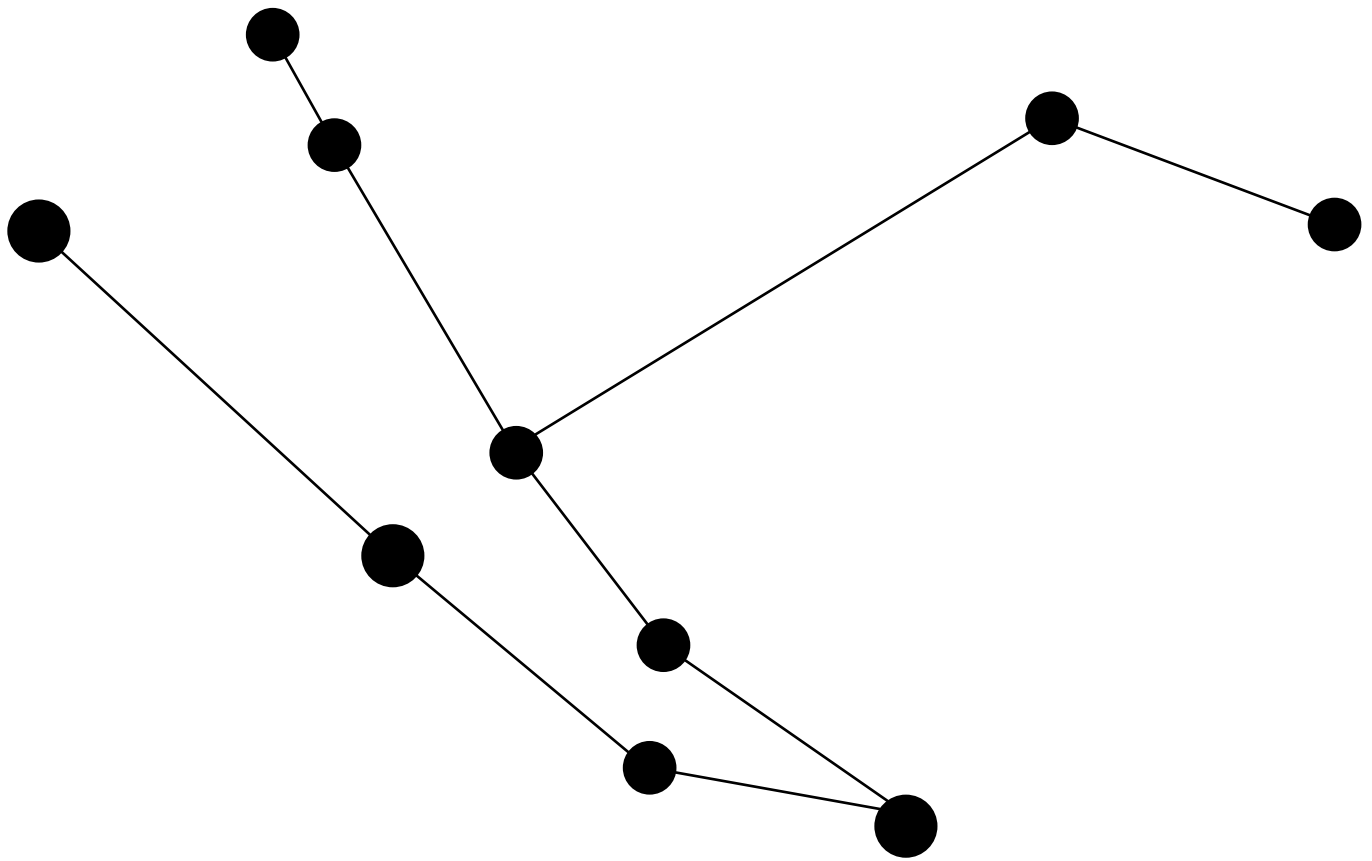
Lyra, The Lyre



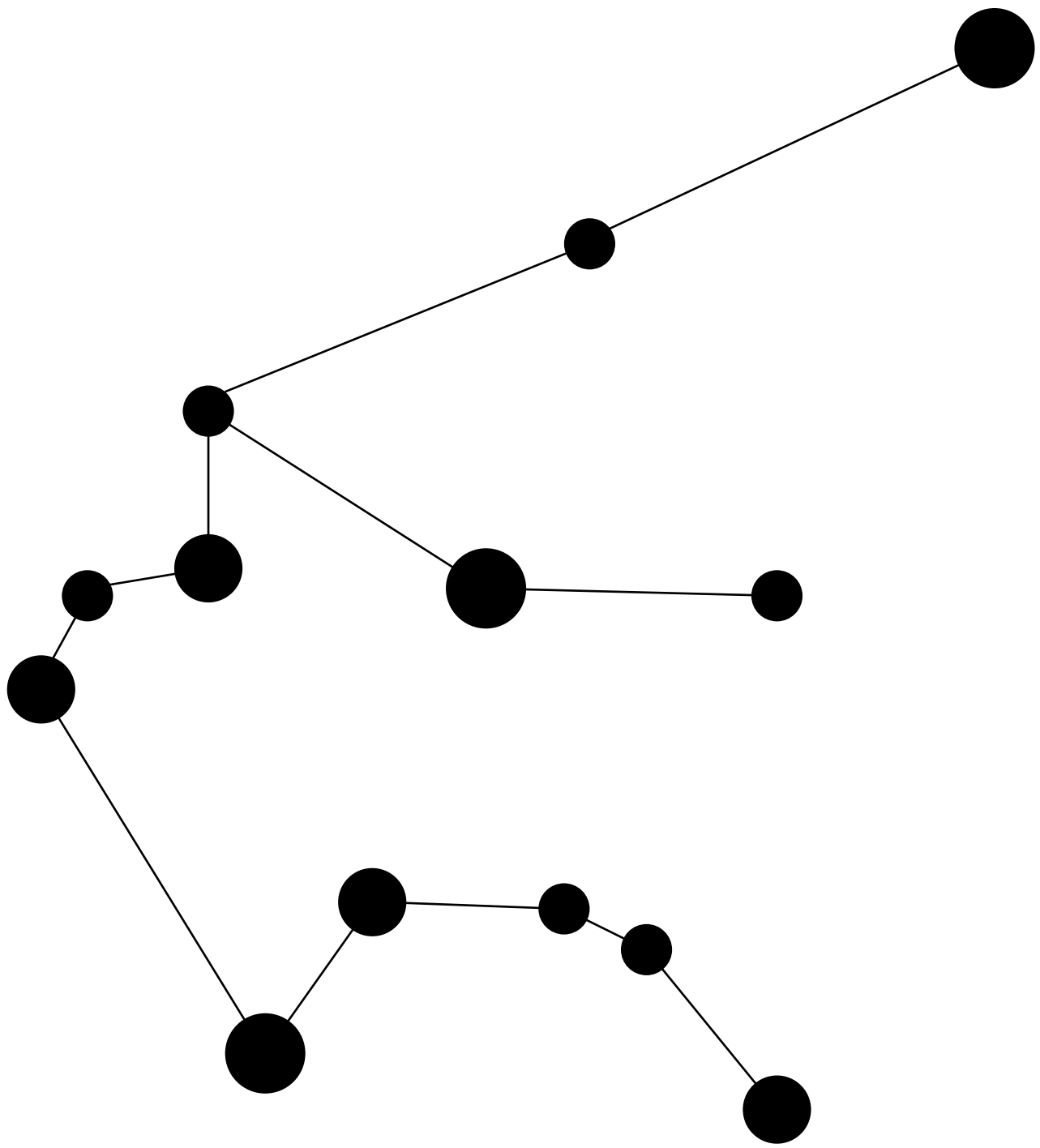
Draco, The Dragon



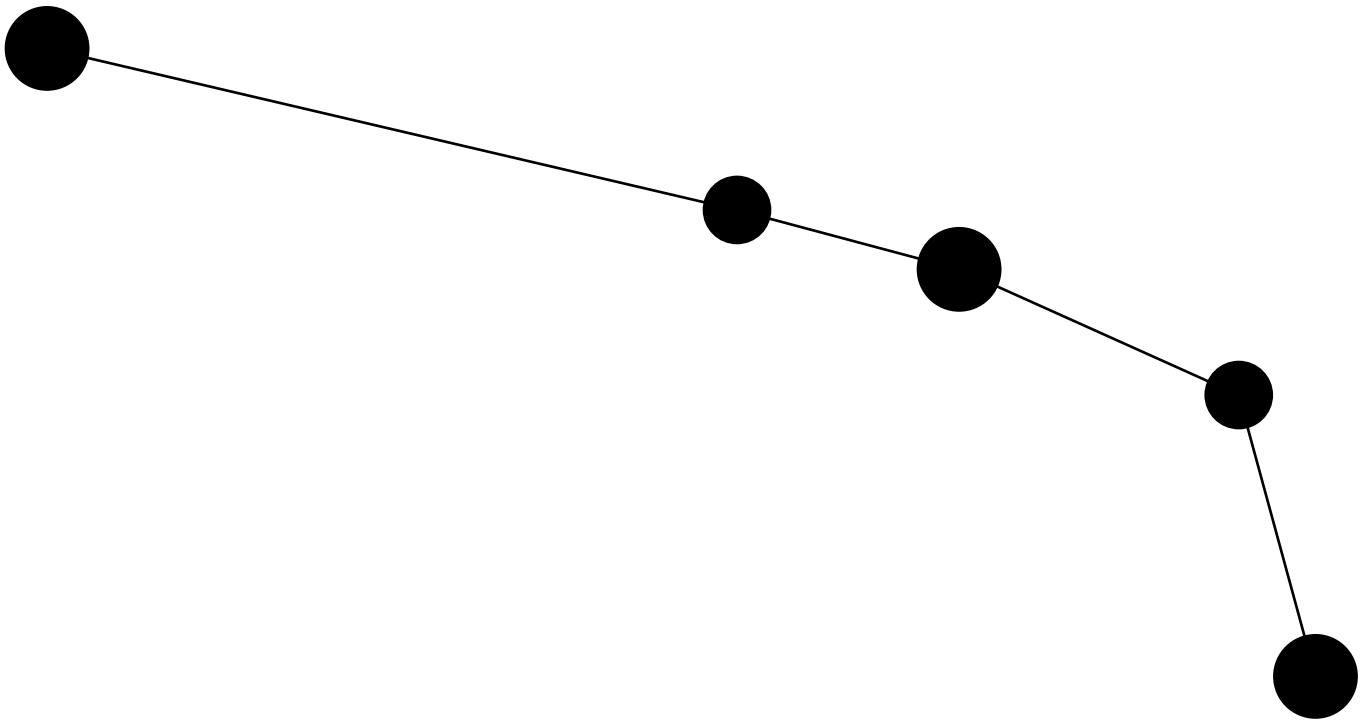
Perseus, The Hero



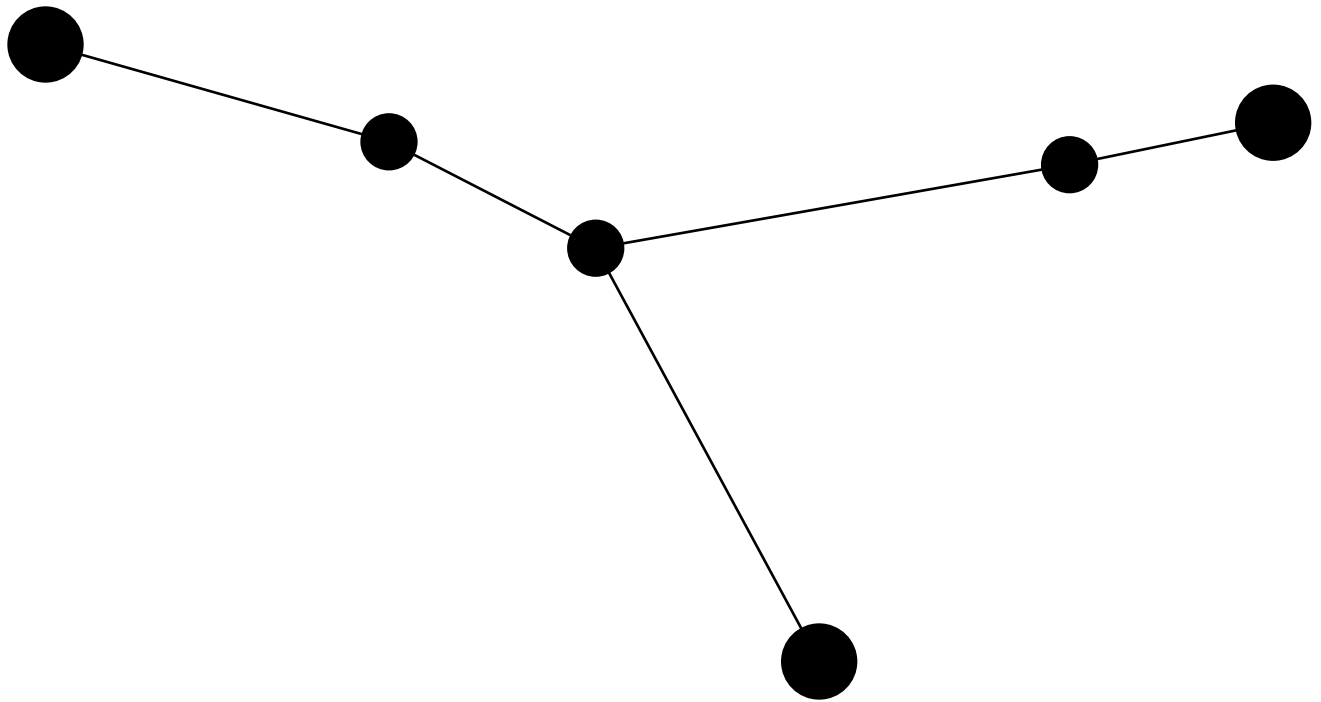
Andromeda, The Princess



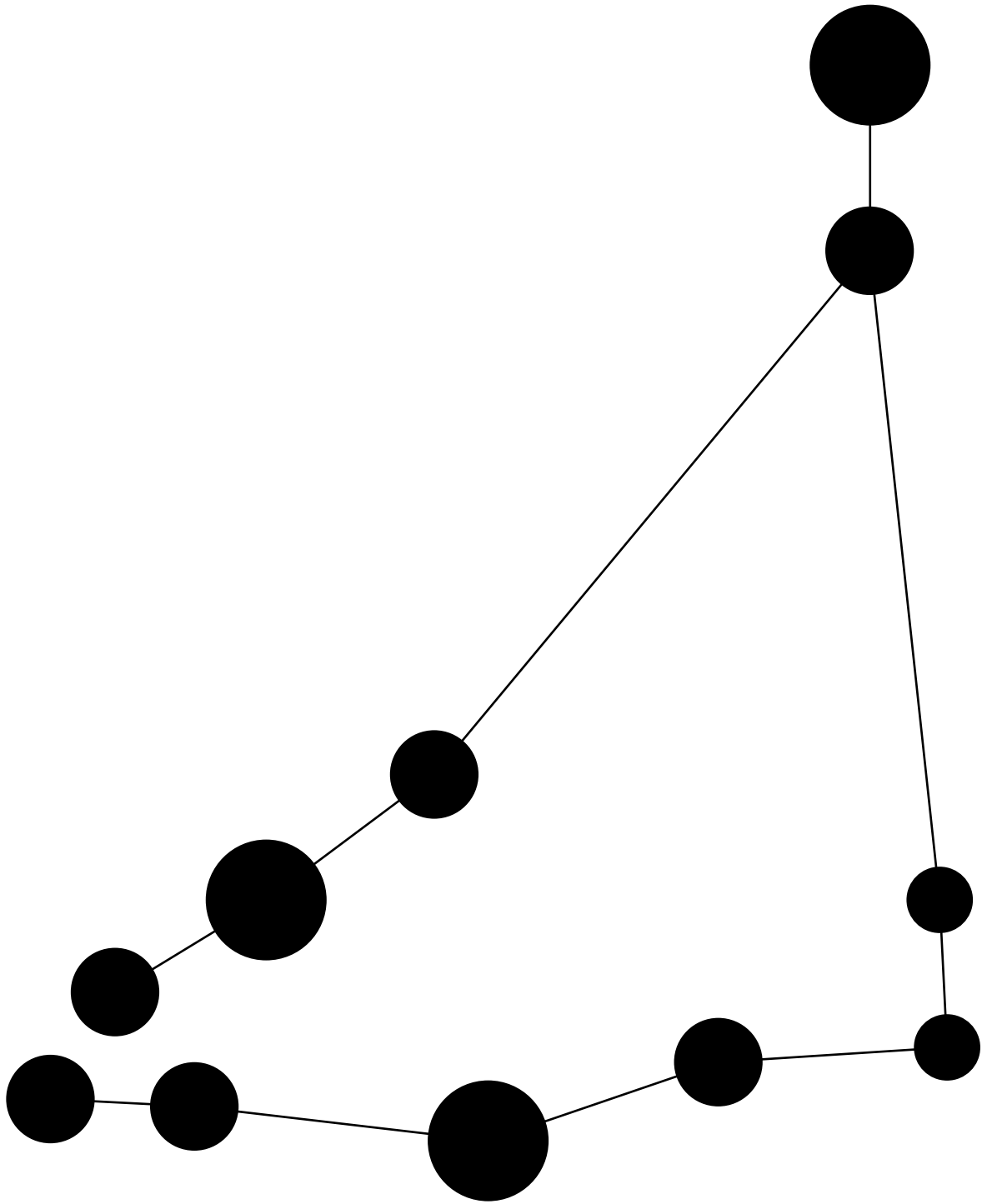
Aquarius, The Water Carrier



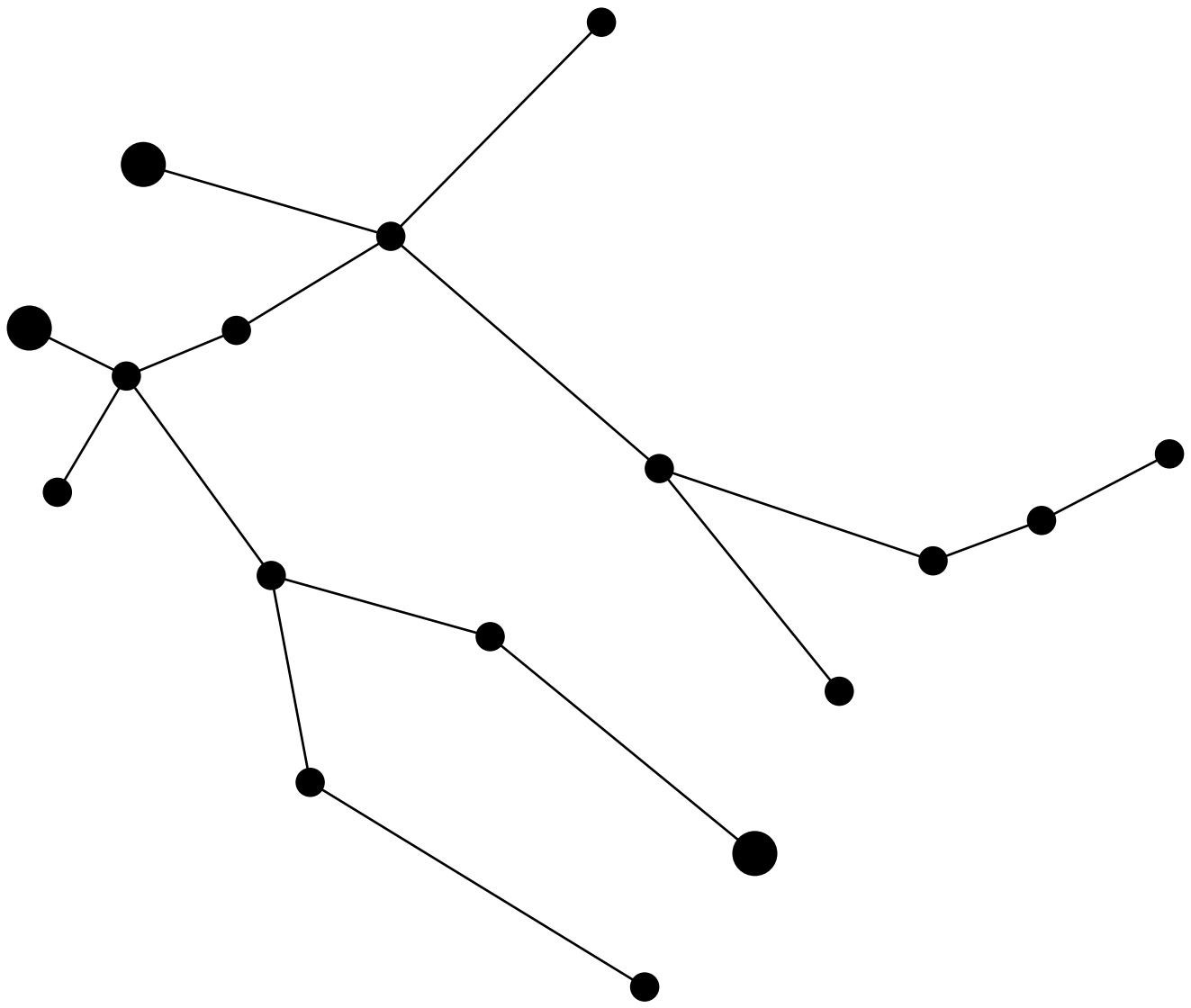
Aries, The Ram



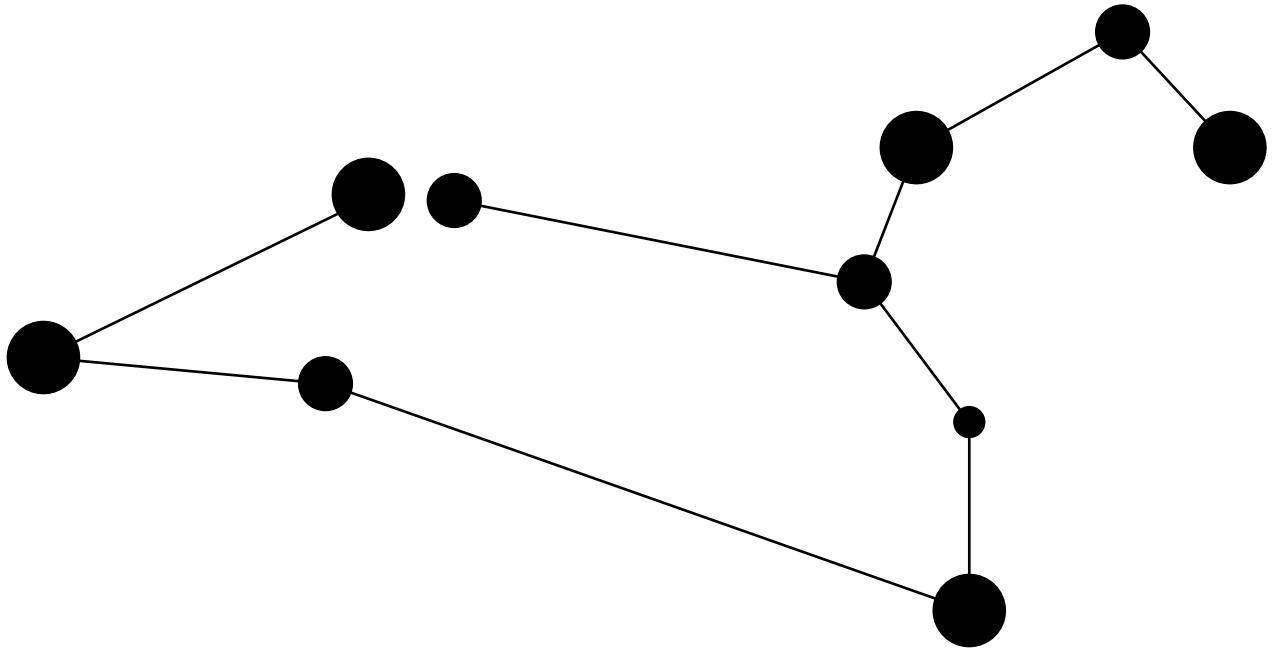
Cancer, The Crab



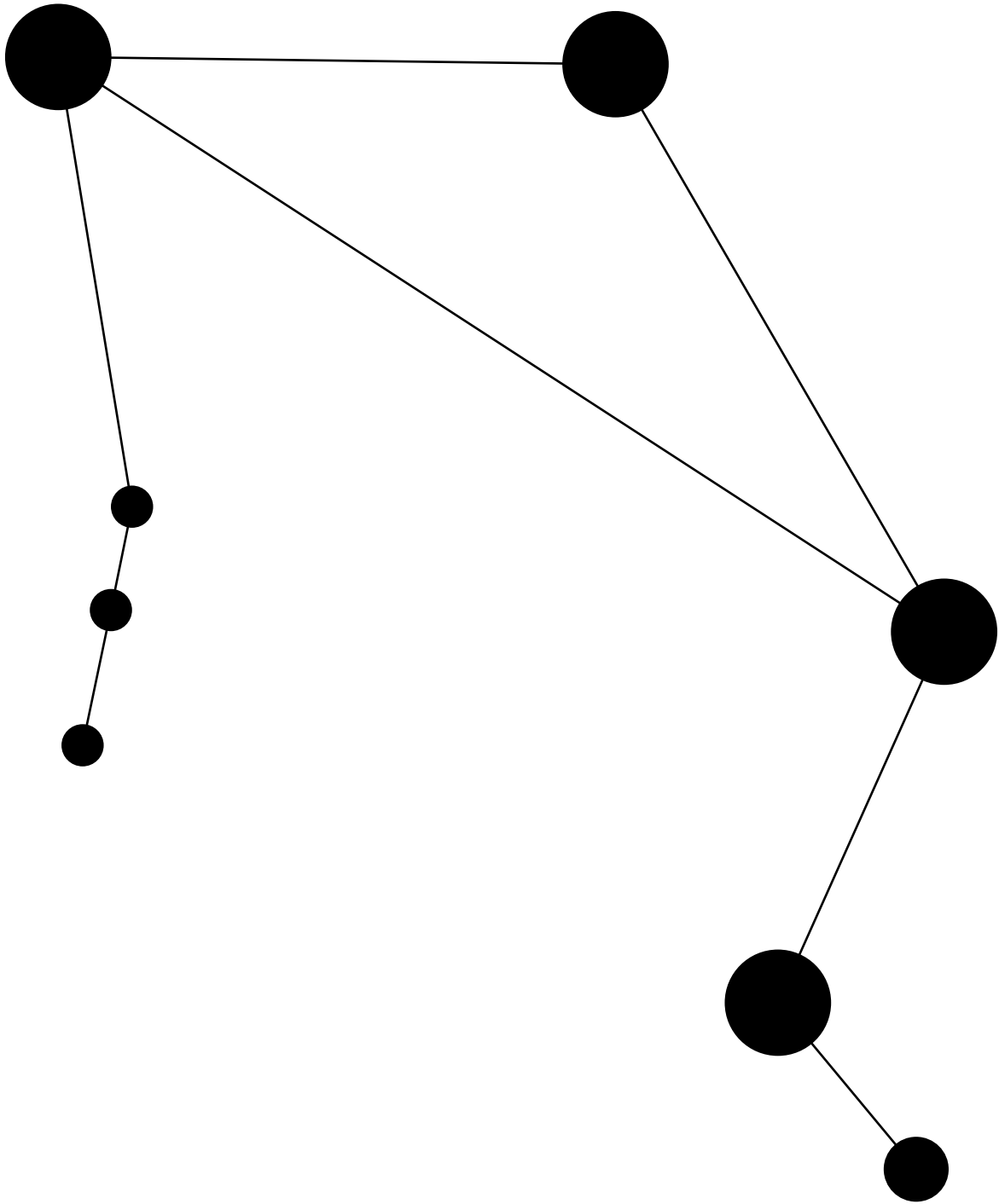
Capricorn, The Goat with the Tail of a Fish



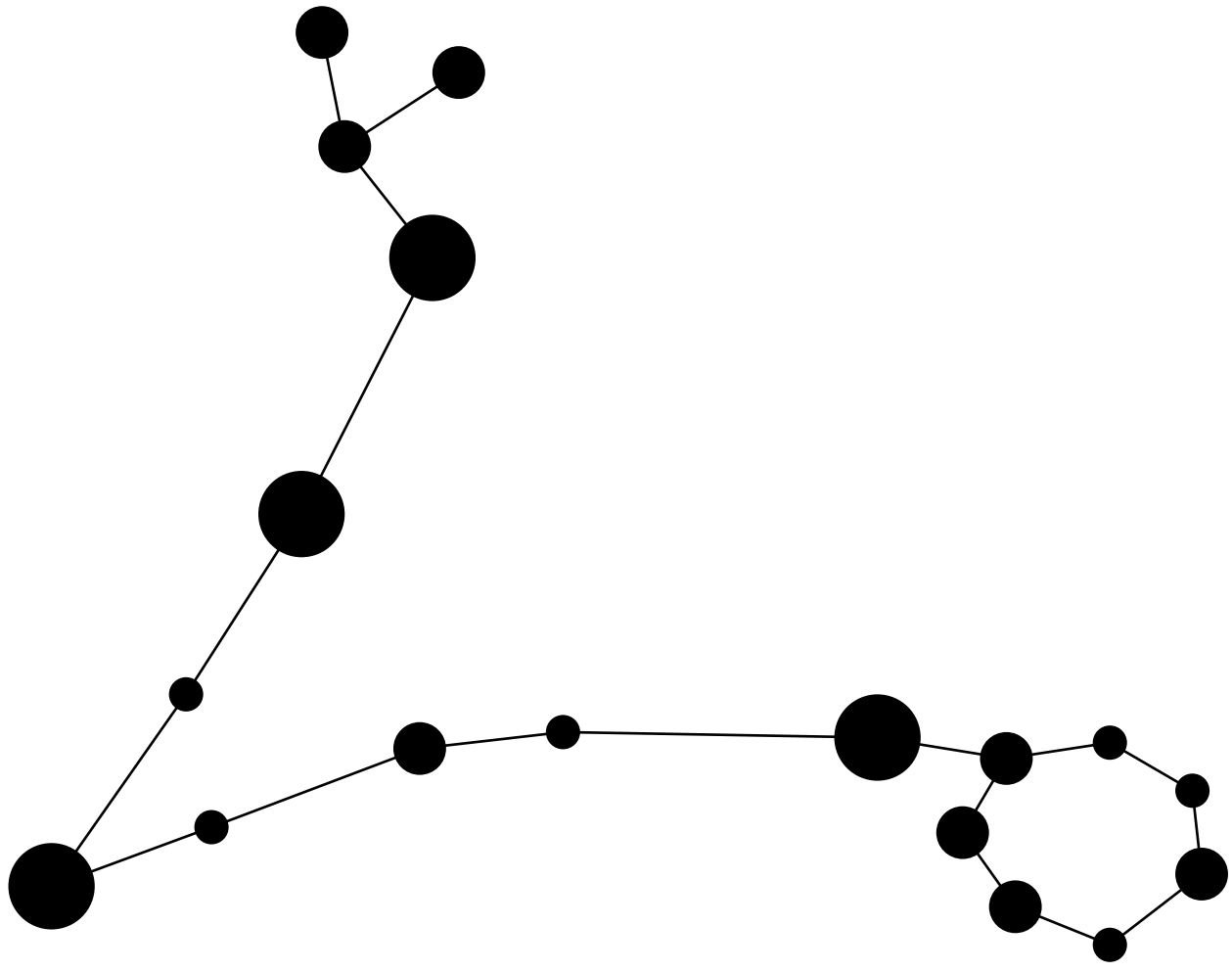
Gemini, The Twins



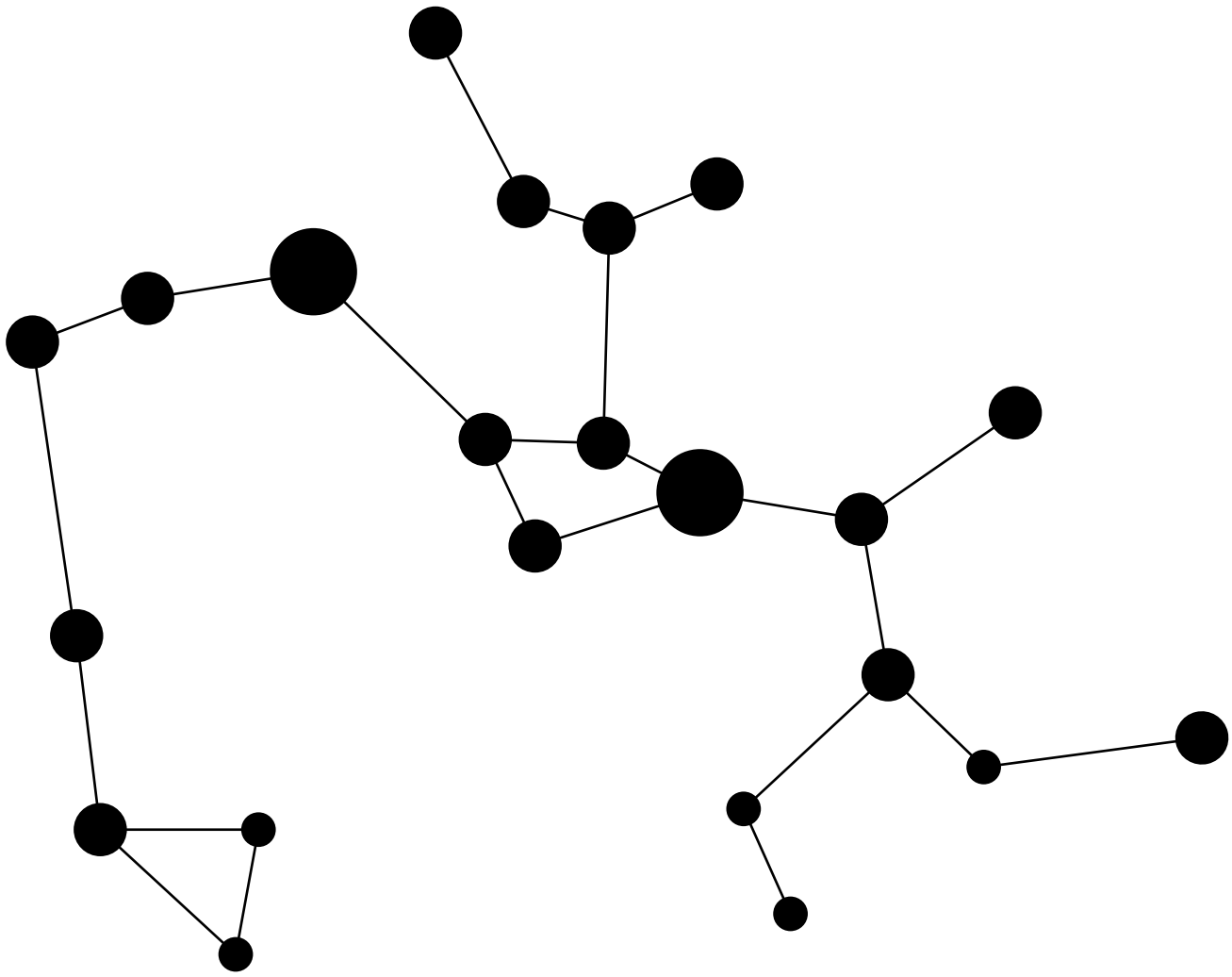
Leo, The Lion



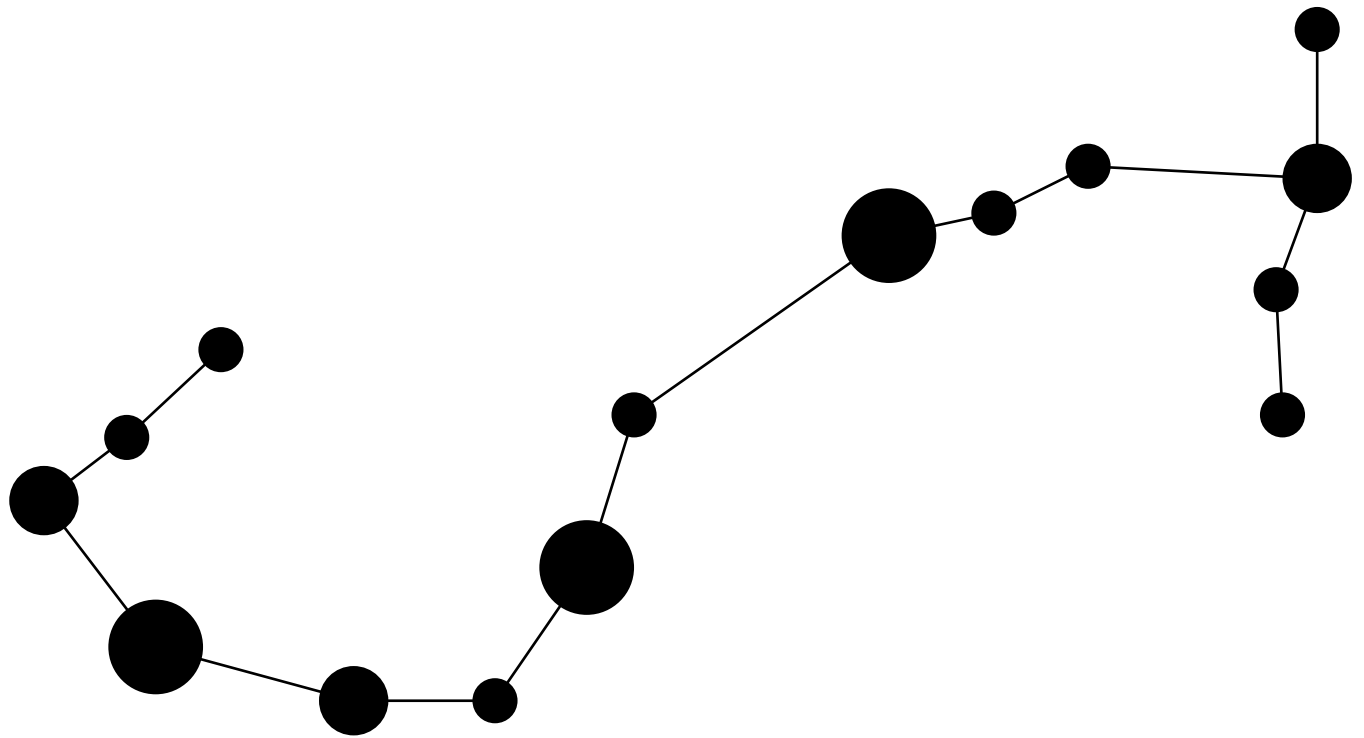
Libra, The Scales



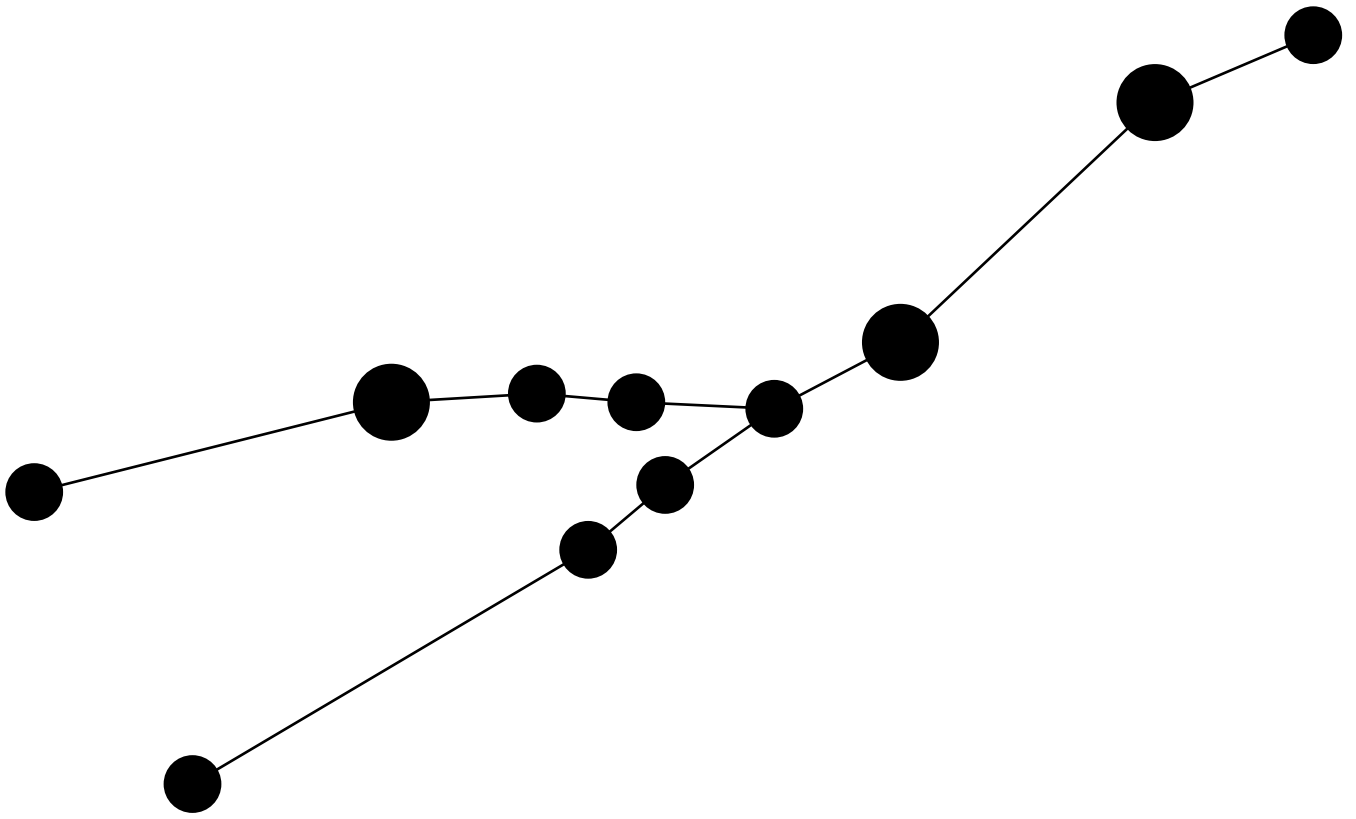
Pisces, The Fish



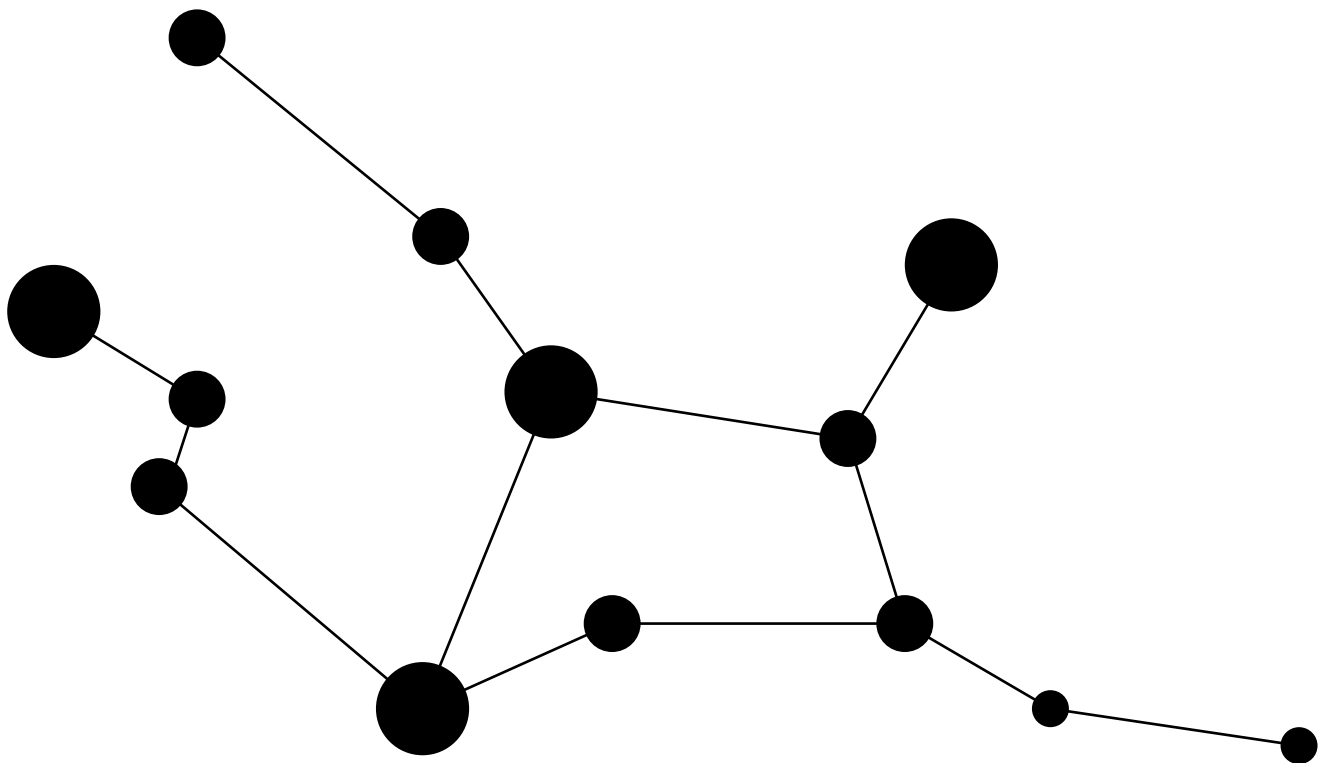
Sagittarius, The Archer



Scorpio, The Scorpion



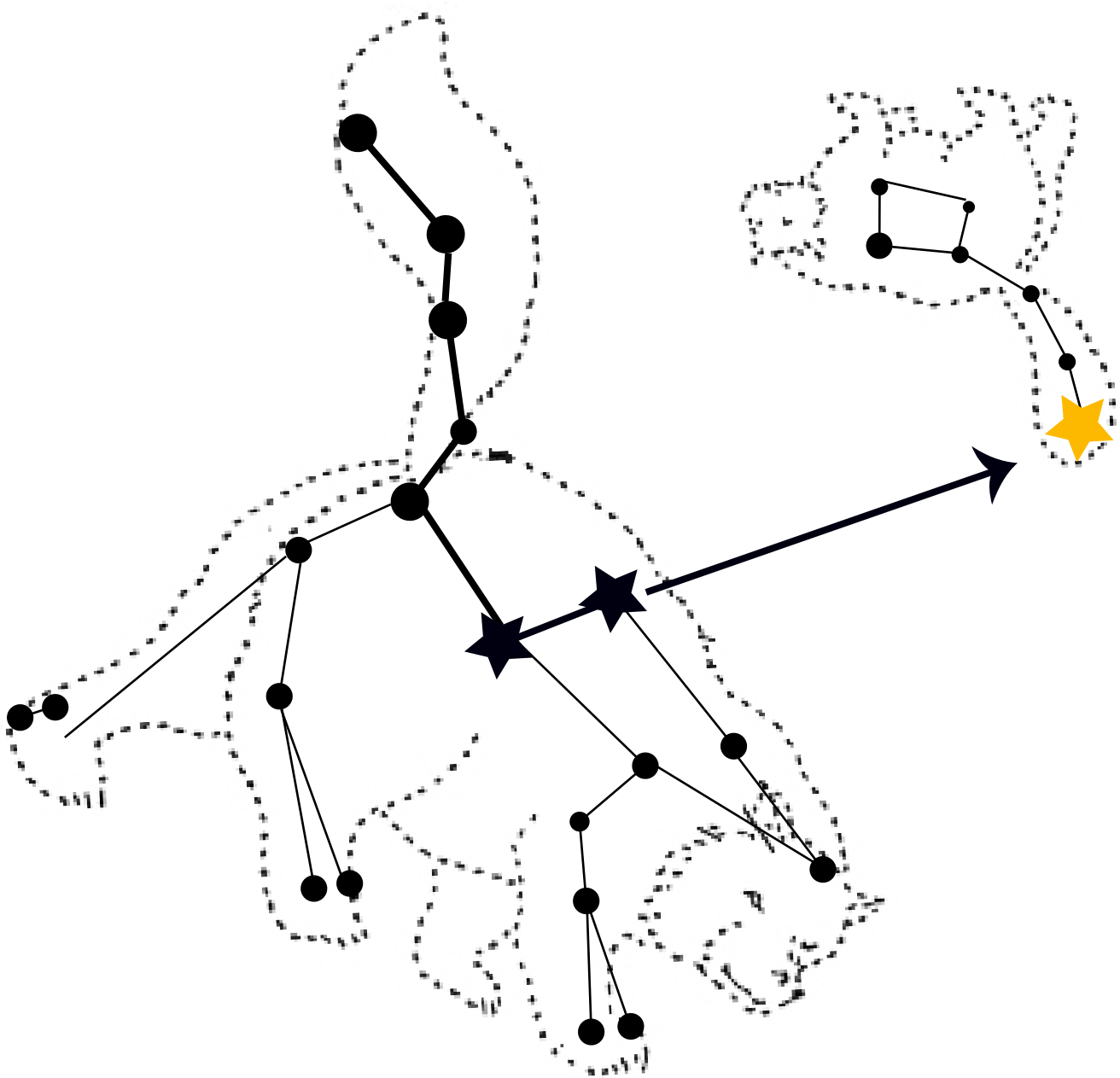
Taurus, The Bull



Virgo, Goddess of Justice

How to find Polaris, the North Star

Polaris appears to hold still in our sky, always pointing the way due north



If you can find the Big Dipper, you can find Polaris!
The two outer stars in the bowl of the Big Dipper always point to Polaris, the end of the handle of the Little Dipper.