Dog Torque

You need ☑ a classmate

Activity

Five canine friends visit the Hounds 'r' Us playground for dogs:

Freda Frise 4 kg

Russell Terrier 8 kg

Fleur Collie 16 kg

Germaine Shepherd 32 kg
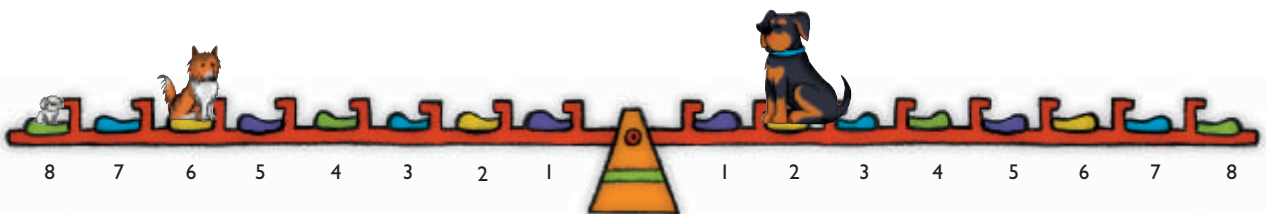
Rob Rottweiler 64 kg

The playground has a see-saw that the friends think is just the cat's whiskers, but getting the right balance is tricky.
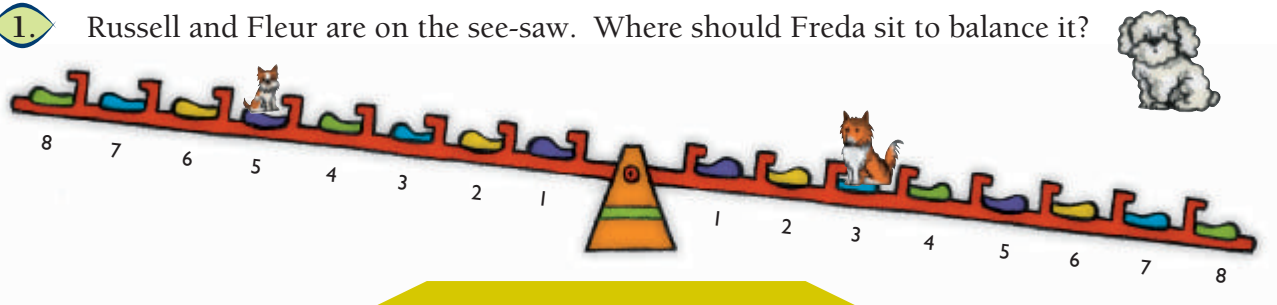
> Fleur weighs only half as much as Germaine, but she finds she can balance the see-saw if she sits far enough back:
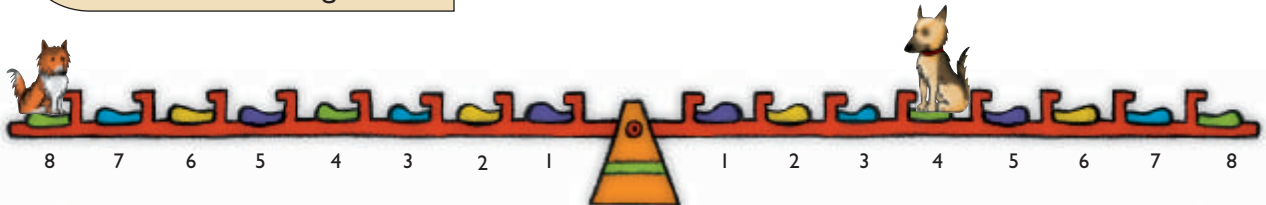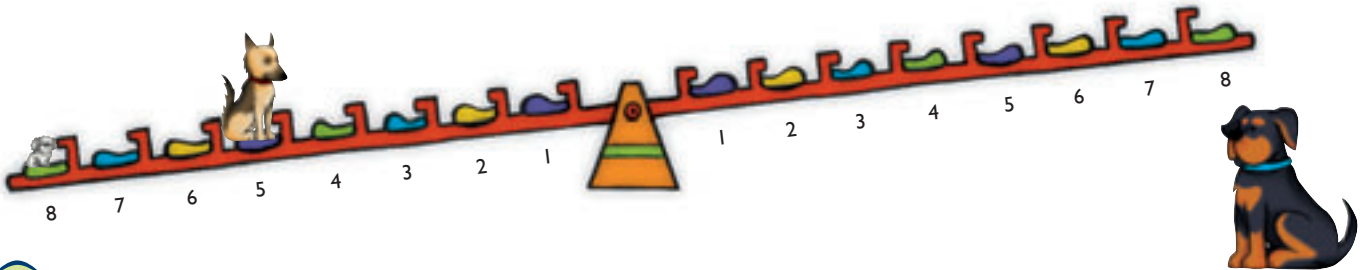

> Freda, Fleur, and Rob find they can balance the see-saw like this:

1. Russell and Fleur are on the see-saw. Where should Freda sit to balance it?

Exploring inverse proportion

2. Freda and Germaine are on the see-saw. Where should Rob sit to balance it?

3. What connection can you find between the weights of the animals and where they must sit to balance the see-saw?

4. If Germaine sits in seat 3, which animals could balance the see-saw and where would they need to sit?

5. Find at least two ways for all five dogs to have a see-saw at the same time.

6. Because of his weight, Rob always seems to end up near the centre of the see-saw.

    a. How near to the end can he sit if his friends are to be able to balance him?

    b. When Rob is in this seat, where must his friends sit?

7. Larry the Labrador joins the five friends at Hounds 'r' Us. He weighs 24 kilograms.

Find several ways for Larry to have a see-saw with the other dogs.

8. Create some see-saw problems for a classmate to solve.