## Newton's 1<sup>st</sup> Law

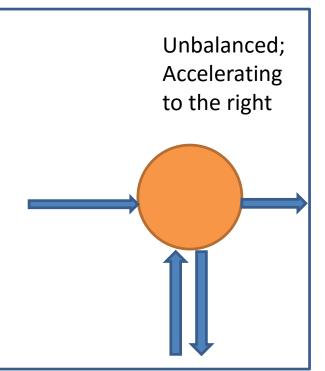
## Balanced v. Unbalanced Forces

For each slide:

Use the picture and provided information to (a) determine if the forces acting on the object are balanced or unbalanced (b) identify all of the forces acting on the object.

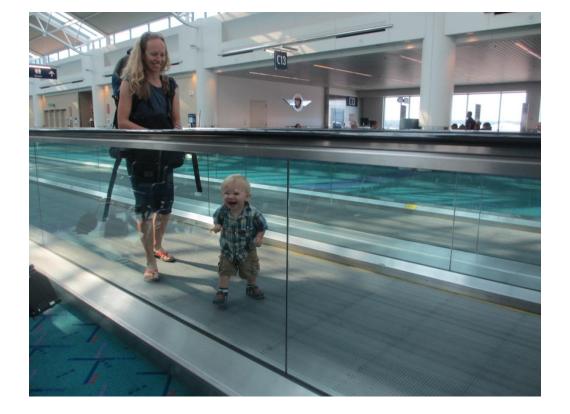
 (c) draw a free-body diagram: this shows all the forces acting on a single object.

(d) Identify the state of motion(include direction): static equilibrium,dynamic equilibrium, or accelerating



## The cat is doing what cats do best.





The child is standing on a moving sidewalk which is moving with a constant velocity.



• The wagon with 9 puppies is moving to the right with a constant velocity.

The motorcycle is moving with a constant speed.





## Blast off!