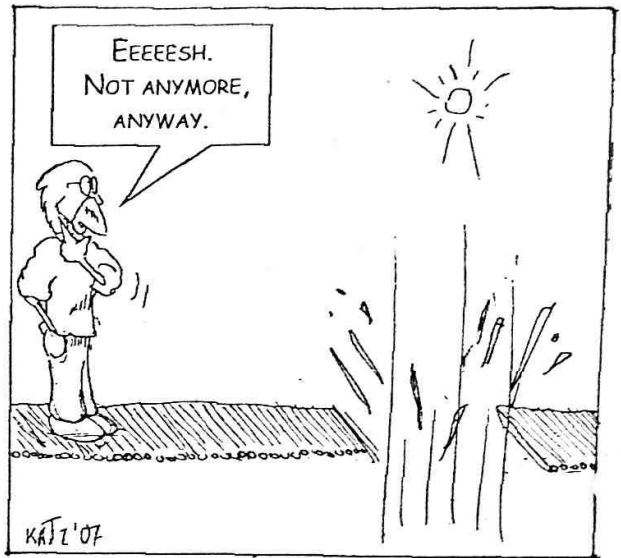
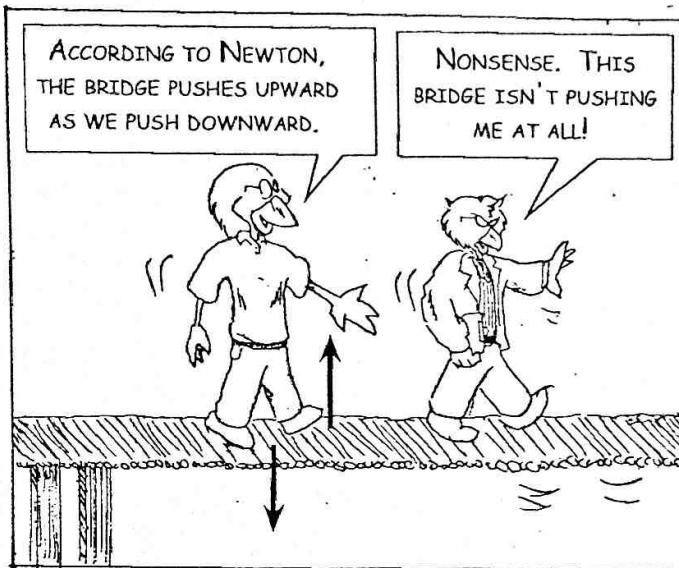


MINI-COMIC: ACTION-REACTION PAIRS

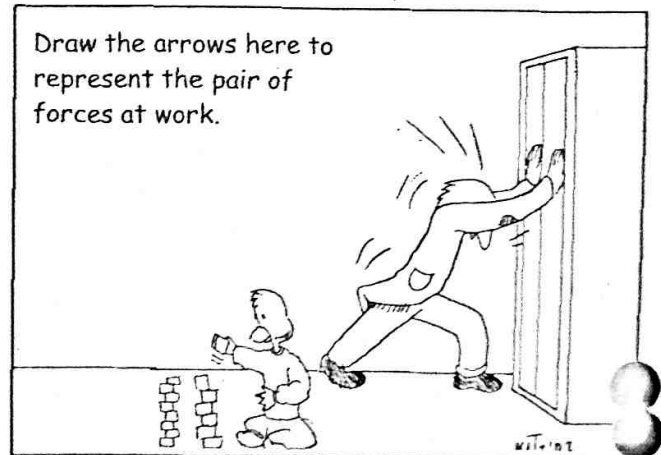
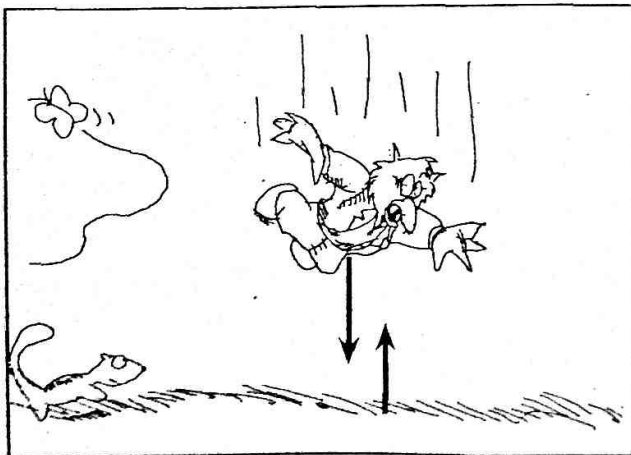
Directions: Read the cartoon and the text. Then, complete the exercise below.



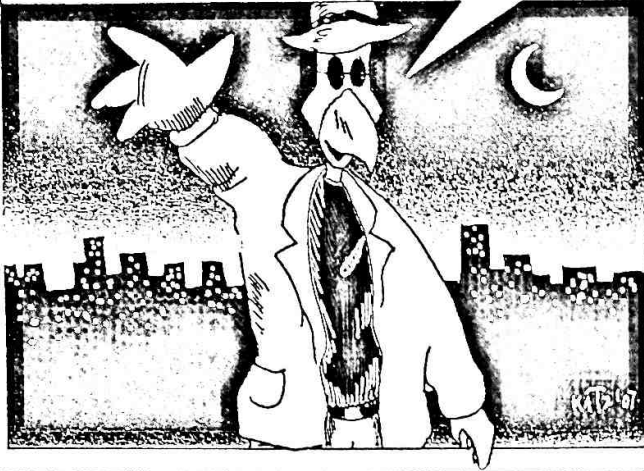
Newton's Law states that every action results in an equal and opposite reaction. For example, as Dr. Birdley's weight pushes down on a bridge, a sturdy bridge will push back up on Dr. Birdley. This can be illustrated using a force pair diagram, where arrows represent the directions of the forces at work (see above).

After the bridge breaks, the force pairs change. The earth is pulling down on Owelle, while Owelle is pulling up on the earth (see below.)

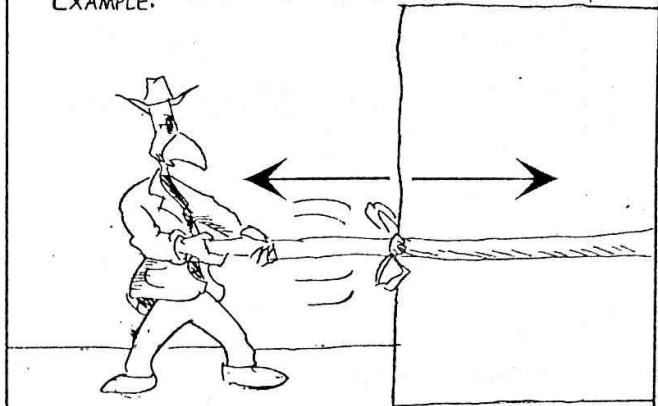
Action-reaction pairs can also be horizontal. Here, as Dr. Birdley pushes on the cabinet, the cabinet pushes back on him.



IN EACH DIAGRAM, DESCRIBE THE PAIR OF FORCES AT WORK. SHOW THEIR DIRECTIONS WITH ARROWS.

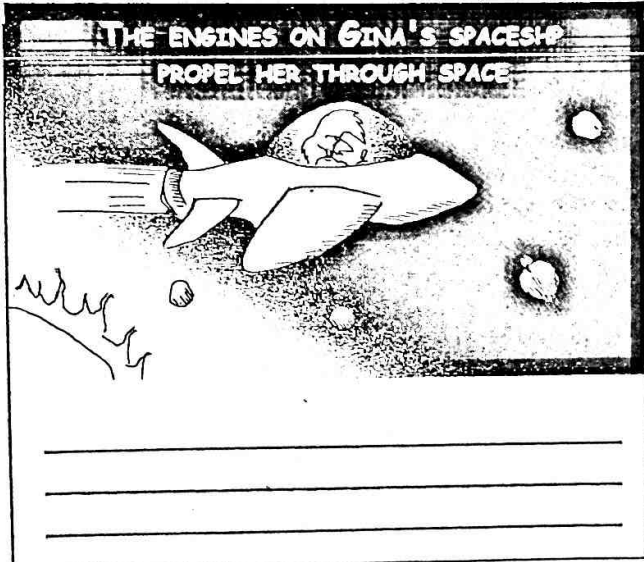


EXAMPLE:

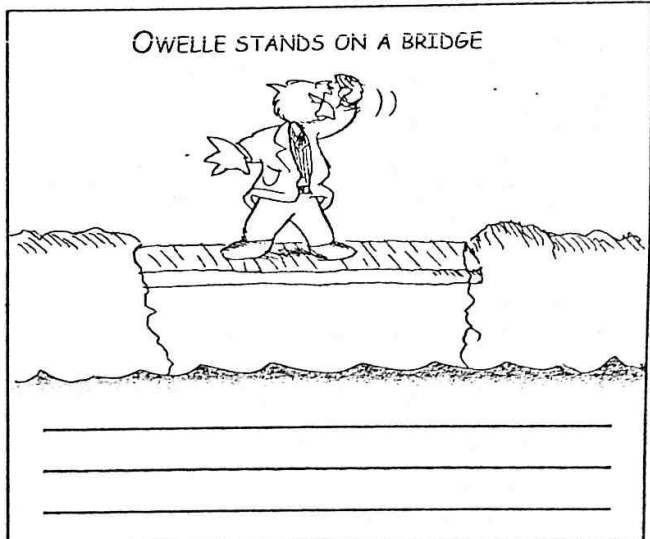


AS JAYKES PULLS THE BOX, THE BOX PULLS BACK IN THE OPPOSITE DIRECTION.

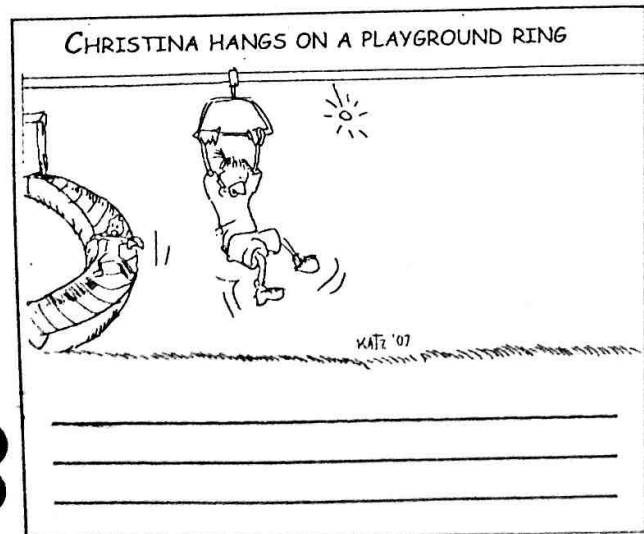
THE ENGINES ON GINA'S SPACESHIP PROPEL HER THROUGH SPACE.



OWELLE STANDS ON A BRIDGE



CHRISTINA HANGS ON A PLAYGROUND RING



BIRDLEY FALLS TOWARDS THE EARTH

