

### Answer on question #52085, Physics, Field Theory

**Question** 6. Airplane flight is best illustrated by

Boyle's law.

Bernoulli's principle.

Archimedes' principle.

Heat law

7 What is the buoyant force acting on a 10-ton ship floating in the ocean

10 tons

more than 10 tons

less than

depends on density of seawater

8 How much pressure do you experience, when you balance a 5 kg ball on the tip of your finger, which has an area of 1 cm<sup>2</sup>?

490 kPa

4600 Pa

34 N

No answer

9 If you wish to warm 100 kg of water by 20°C for your bath, how much energy is required? (Specific heat capacity of water is 1 cal/g°C)

500 kcal

1000 kcal

2000 kcal

3000 kcal

**Solution** 6. Airplane flight is best illustrated by Bernoulli's principle.

7. 10 tons

$$8. p = \frac{F}{S} = \frac{5 \cdot 9.8}{10^{-4}} = 490 \text{ kPa}$$

$$9. Q = cm\Delta T = 1000 \cdot 100 \cdot 20 = 2000 \text{ kcal}$$