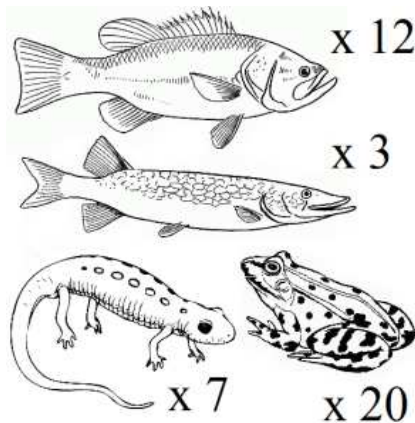


INTERNATIONAL KANGAROO SCIENCE CONTEST

1. Half-way between a fish and an attacker there is a small hiding place. The fish is swimming with a speed v along the river's current. The speed v is half of the speed of the attacker. What should be the minimum river current's speed which will allow the fish to escape?



- A) v
D) any value
- B) $2v$
E) never
- C) $v/2$
2. A thermometer with liquid, incorrectly calibrated, is inserted in a mixture of water and ice and it indicates -5°C . When inserted in the vapours of boiling water, it shows 120°C . What value indicates the thermometer when it is placed in contact with a body having a temperature of 40°C ?
- A) 40°C
D) 55°C
- B) 50°C
E) 70°C
- C) 45°C
3. In a river there are 12 carps, 3 pikes, 20 frogs and 7 newts. How many atria with oxygenated blood do they have together?



- A) 42
D) 32
- B) 27
E) 35
- C) 15

INTERNATIONAL KANGAROO SCIENCE CONTEST

4. The stem has terminal and lateral buds. If a terminal bud is sectioned, the plant:

- A) does not grow taller, but branches out
- B) does not grow taller and does not branch out
- C) grows taller, but does not branch out
- D) grows taller and branches out
- E) fades because it can't breathe

5. You went riding your bike. In the first hour, your average speed was of 10 km/ hour, for the next two hours 7 km/ hour. Then you took 3 hours to retur to your departure location. What was your average speed when you returned?

- A) 4 km/h
- B) 8 km/h
- C) 17 km/h
- D) 24 km/h
- E) another value

6. What group do bats belong to?



- A) birds
- B) insects
- C) mammals
- D) reptiles
- E) rodents

7. Where does sound travel fastest?

- A) wood
- B) space
- C) glass
- D) water
- E) air

8. When walking along an asphalt street after sundown, a person often feels heat coming off the pavement. The heat is moving from the asphalt to the person by

- A) conduction
- B) convection
- C) expansion
- D) radiation
- E) contraction

INTERNATIONAL KANGAROO SCIENCE CONTEST

9. What is the main reason for using sand on icy roads?



- A) to create friction between car wheels and the road
- B) to reduce the glare of headlights or sunlight
- C) to help melt the ice covering the road
- D) to dry the road
- E) to make road more visible

10. The table lists the volume and the mass of five substances. Which substance has the lowest density?

Substance	Volume(cm^3)	Mass (g)
brick	71	100
ice	109	100
water	100	100
vax	56	100
honey	70	100

- A) brick
- B) ice
- C) water
- D) vax
- E) honey