Maths in the Wild: Predator–Prey Multiple Choice Questions

Name: _____Date: _____

1. What is meant by a predator?

   A. An animal that eats plants

   B. An animal that is hunted

   C. An animal that eats other animals

   D. An animal that lives alone

2. Which rule models the hare population without predators?

   A. $H = H - 0.2H$

   B. $H = H + 0.2H$

   C. $H = H + 2$

   D. $H = 0.2H$

3. If there are 60 hares and the birth rate is 0.1, what is the population after one year?

   A. 66

   B. 70

   C. 72

   D. 80

4. Why does the lynx population decrease when there is no prey?

   A. Birth rate

   B. Food rate

   C. Death rate

   D. Migration

5. Which formula models the lynx population without prey?

   A. $L = L + 0.1L$

   B. $L = L - 0.1L$

   C. $L = L + 0.2L$

   D. $L = HL$

6. What does HL represent in the model?

A. Total population

B. Births

C. Hare–lynx encounters

D. Deaths

7. What pattern is seen in predator–prey graphs?

A. Constant

B. Both go to zero

C. Cycles

D. Increase forever

8. Why are mathematical models not perfect?

A. Equations are wrong

B. Animals ignore maths

C. They simplify reality

D. Numbers cannot model nature