Geodynamics Quiz 1: plate motions

Read Chapter 2 up through and including section 2.4.1

1 The three types of plate boundaries are
   a) Divergent (such as mid-ocean ridges), convergent (such as subduction zones), and conservative (such as transform faults)
   b) Divergent (such as mid-ocean ridges), convergent (such as subduction zones), and resurgent (such as transform faults)
   c) Divergent (such as mid-ocean ridges), convergent (such as transform faults), and resurgent (such as subduction zones)
   d) There really aren’t plate boundaries on the planet earth

2 The symbol for a mid-ocean ridge is
   e) Barbed line
   f) Single line with half-arrows on each side
   g) Double line

3 At a spreading ridge, the half-spreading rate is
   h) The velocity that one plate moves with respect to the other plate (Av_B)
   i) The velocity that one plate moves with respect to the spreading ridge
   j) Half of the velocity that one plate moves with respect to the other plate (1/2 * Av_B)
   k) Both i and j

4 The velocity of plate A with respect to plate B is written
   l) Av_B
   m) BV_A
   n) Both l and m are correct

5 The velocity of plate A with respect to plate B is
   o) Equal in magnitude, but opposite in direction to the velocity of plate B with respect to plate A
   p) Av_A
   q) -Av_B
   r) all of the above are correct

6 When using the “flat earth” approximation for the following diagram, you can determine the velocity of plate B with respect to plate C by using vector addition such that:
   s) Bv_C = Av_B + Av_C
   t) Cv_B = Cv_A + Av_B
   u) Bv_C = Av_C + Av_B
   v) Bv_C = Av_C + Bv_C

7 Since the earth is actually not flat, we have to think about plate motions on a spherical earth, using angular velocities. The symbol for angular velocity is _______, and clockwise motion (as viewed from the center of the earth) is ____________
   w) \(\omega\), negative
   x) V, positive
   y) \(\omega\), positive
   z) V, negative