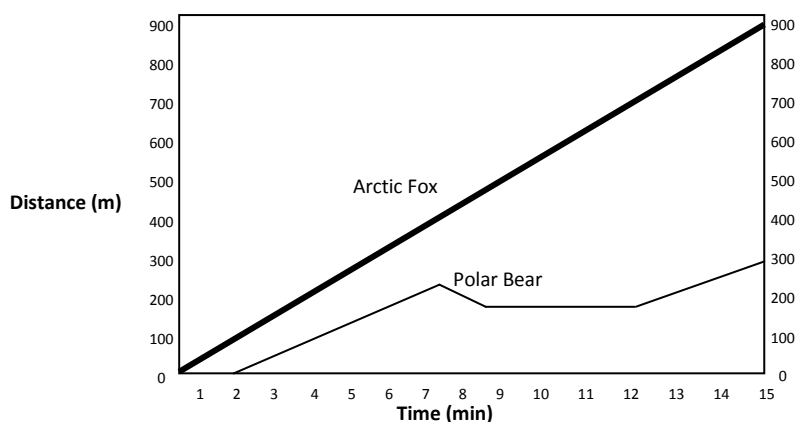# Review for The Motion Test

1. A point or object that is used to determine if something is moving is called a: _____ or a _____. It is almost always assumed to be what: (**Moving *or* Fixed)**?
2. What is the **formula for speed (or velocity)**? (*Use the magic speed triangle for help*)
3. What is the **formula for time**?
4. What is the **formula for distance**?
5. If you travel a distance of 10km in 5 hours what is your **speed**?
6. If you are going 2km/h and need to go 10km to get to the beach **how long** will it take you?
7. You travel at 100km/h for 6 hours. **How far** have you traveled?
8. What is the main **difference** between **speed** and **velocity**?
9. What is the **definition of acceleration** (3 words or less)? **Acceleration** is _____ __ _____.
10. Name **three things** or ways you can **accelerate**?
11. What is the **formula** for **acceleration**?
12. What are the **units** for **acceleration**? (*put down both that are commonly used*)
13. A police car goes from 20 m/s to 60 m/s in 8 seconds. What is the **acceleration** of the car?
14. What is the **formula for SLOPE**?
15. The **SLOPE** of a **DISTANCE vs. TIME Graph** is what?
16. The **SLOPE** of a **SPEED (VELOCITY) vs. TIME GRAPH** is what?

   Use the graph below for questions 17-26.

17. What does the **slope** of either line tell you?
18. What is the **Arctic Fox's speed**?
19. Is the speed of the **Arctic Fox constant** or **changing**? How do you know?
20. Is the speed of the **Polar Bear constant** or **changing**? How do you know?
21. Does the **Polar Bear's** speed **change** at all? How do you know?
22. Between **10 and 12 minutes** is Polar Bear **moving**? How do you know?
23. Who traveled **furthest** in 10 minutes?
24. What is the **Fox's average speed** for the entire 15 minutes?
25. What is the **Polar Bear's average speed** for the entire 15 minutes?
26. Did the polar bear have a **greater average speed** from **2 min. to 7 min.** or from **9 min. to 15 min.**? **Calculate** (show your work & units) the **average speed** for each part of the polar bear's trip.