Balancing Forces WS

Name_____ Period _____

With each of the following pairs of forces, calculate the force needed to end up with a **net force** of **zero**. With the calculation give the **magnitude** and **direction** of the balancing force. Include the Free Body Diagram of the two given forces and the balancing force.

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1. 10.3 N @ 10.0˚ S of E
   5.40 N @ 20.0˚ W of N

Calculated Magnitude_____ Calculated Direction_____

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2. 10.3 N @ 30.0˚ W of S
   5.40 N @ 40.0˚ N of W

Calculated Magnitude_____ Calculated Direction_____

3. 5.40 N @ 50.0˚ N of E
   10.3 N @ 60.0˚ W of N

Calculated Magnitude_____ Calculated Direction_____

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4. 5.40 N @ 70.0˚ S of E
   10.3 N @ 80.0˚ W of N

Calculated Magnitude_____ Calculated Direction_____

5. 10.3 N @ 10.0˚ N of E
   5.40 N @ 20.0˚ E of N

Calculated Magnitude_____ Calculated Direction_____

6. 10.3 N @ South
5.40 N @ 40.0˚ S of E

Calculated Magnitude_____ Calculated Direction_____

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7. 5.40 N @ North
10.3 N @ 60.0˚ S of E

Calculated Magnitude_____ Calculated Direction_____

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8. 5.40 N @ 70.0˚ W of N
10.3 N @ 80.0˚ S of E

Calculated Magnitude_____ Calculated Direction_____