Translational Equilibrium 9.1

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| 1.  | Find the third force (the equilibrant) that would prevent the system from accelerating. 23.16 N At 292.8o Trig angle. (22.8o to the right of the -y axis) |
| 2.  | Find the third force (the equilibrant) that would prevent the system from accelerating. 6.000 N At 348.9o Trig angle. (11.1o below the +x axis) |
| 3.  | Find the third force (the equilibrant) that would prevent the system from accelerating. 56.4 N @ 318.8o Trig angle. (41.2o below the +x axis) |
| 4.  | Cable A makes an angle of 63.0o with the horizontal, and B makes an angle of 23.0o with the horizontal. What is the tension in each cable for there to be no acceleration of the system? A = 606 NB = 299 N |
| 5.  | Find the tensions in Cable C and D:C = 151 ND = 151 N |

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| 6.  | Find the tensions in Cable C and D:C = 107 ND = 390. N |
| 7.  | Find the tensions in Cable C and D:C = 270. ND = 224 N |
| 8.  | Find the tensions in Cable C and D:C = 129 ND = 129 N |
| 9.  | Find the tensions in Cable C and D:C = 389 ND = 347 N |
| 10.  | Cable A has a force of 23 N along it, what must be the tensions in cable C and B for there to be no acceleration of the system? B = 17 NC = 27 N |

Also from your textbook: Chapter 9: 1, 5, 9, 11, 12, 14 starting p. 247