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 N  B = 299 N |
| 5. | Find the tensions in Cable C and D:  C = 151 N  D = 151 N |

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| 6. | Find the tensions in Cable C and D:  C = 107 N  D = 390. N |
| 7. | Find the tensions in Cable C and D:  C = 270. N  D = 224 N |
| 8. | Find the tensions in Cable C and D:  C = 129 N  D = 129 N |
| 9. | Find the tensions in Cable C and D:  C = 389 N  D = 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 N  C = 27 N |

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