

# Force Diagram Practice

Name:  
Date:  
Period:

<p>Your little sister sits on your bed while you are working on your homework. Her weight due to gravity is 490 Newtons. The force of compression opposes her weight with a force of 490 Newtons. What is the net force on your sister?</p>	<p>Diagram with vectors:</p>		
	<table border="1"><tr><td data-bbox="716 701 1099 800"><input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced</td><td data-bbox="1099 701 1443 800">Net Force:</td></tr></table>	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Net Force:
<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Net Force:		
<p>A man is trying to move a bookshelf to a different corner of the room. He pushes the bookshelf with a force of 100 Newtons. The force due to friction between the bookshelf and the carpet is 40 Newtons. What is the net force on the bookshelf?</p>	<p>Diagram with vectors:</p>		
	<table border="1"><tr><td data-bbox="716 1276 1099 1375"><input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced</td><td data-bbox="1099 1276 1443 1375">Net Force:</td></tr></table>	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Net Force:
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<p>In a tug of war, two teams, Team A and Team B compete to see who is the strongest. Team A has 3 people, while Team B has 4 people. If each person in Team A pulls on the rope with a force of 90 N, and each person in Team B pulls on the rope with a force of 70 N, which team will win the tug of war? What is the net force?</p>	<p>Diagram with vectors:</p>		
	<table border="1"><tr><td data-bbox="716 1850 1099 1942"><input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced</td><td data-bbox="1099 1850 1443 1942">Net Force:</td></tr></table>	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Net Force:
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<p>A marathon cyclist begins his race to the finish line. He pedals forward with a force of 300 Newtons. The friction due to air resistance is opposing the cyclist with a force 15 Newtons. Also, the friction between the wheels of the bike and ground is 30 Newtons. What is the net force on the cyclist?</p>	Diagram with vectors:	
	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Net Force:
<p>An Olympic weightlifter tries to lift a heavy weight off the ground with a force of 450 N. If gravity is pulling the weight towards the ground with a force of 550 N, will the weightlifter be able to lift the weight off the ground? Why or why not?</p>	Diagram with vectors:	
	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Will he lift the weight off the ground?
<p>An ice skater and a roller skater decide to race to see who is the fastest. The ice skater provides a force of 85 N forward on ice with the force of friction being 15 N on his skates. The roller skater applies a force of 105 N to move forward, with the force of friction being 30 N on his skates. If all the forces stay constant through out the race, who will win? Why?</p>	Diagram with vectors:	
	<input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced	Who will win?