Forces Practice

1 Write down three things a force can do to an object.

(a)

(b)

(c)

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2 Do you need a force to do these things? How did you decide?

(a) Stop a moving car,

(b) Throw a basketball,

(c) Compress air for a tyre,

(d) Stretch a spring,

(e) Float on water,

(f) Hold a car still on a flat road,

(g) Drive a van up a hill at a steady speed,

(h) Hold a weight above your head.

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3 Fill in the table with the names and directions of the forces.

Example	**Name of force**	**Direction**
Force of gravity		
Force from engine		
Force which stops things slipping		
Force from wings		
Support force from the floor		
Floating force		

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4 When drawing a force diagram,

(a) should force arrows point towards or away from the object?

(b) what does a long force arrow mean?

5 When drawing a force diagram,

(a) must the diagram be to scale?

(b) can you draw a cat like this?

(c) if two objects touch in real life, how do you draw them in the diagram?

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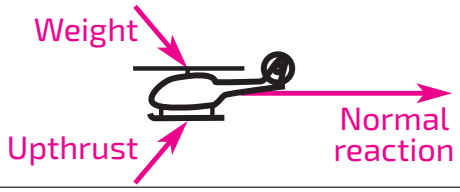
6 The diagram shows a hovering helicopter.

(a) What is wrong with this diagram?

(b) Make a better diagram



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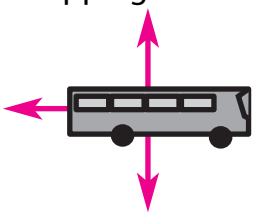
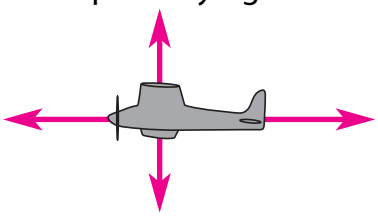
7 Label the forces on the diagrams.

(a) A bus stopping



(b) An aeroplane flying



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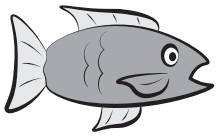
8 Draw force arrows on the objects. Use longer arrows for stronger forces.

(a) A basketball being thrown.

(b) A stationary fish in water.



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9 Weight is a non-contact force. What does this mean?

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10 Name two other non-contact forces.

(a)

(b)