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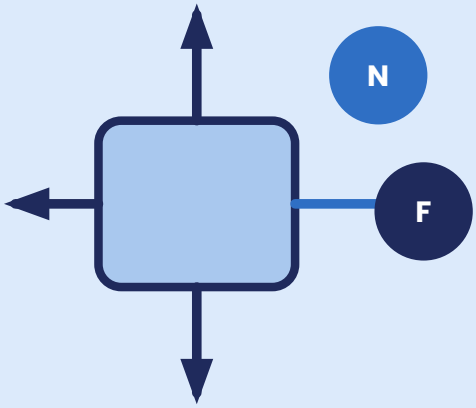
Year 7 • KS3 Physics

Forces



Mark Scheme – Teacher Copy

Answers, marking points and guidance for the Forces (Part 2) worksheet.

Push & pull | Newtons | Contact | Non-contact | Friction | Balanced

KEY IDEAS IN THIS WORKSHEET — YEAR 7

Name: _____ Class: _____

Date set: _____ Date due: _____

What's inside

Section A	What is a force?	**13 marks**
Section B	Contact and non-contact forces	**12 marks**
Section C	Force arrows and balanced forces	**10 marks**

Marking notes

- (1) = one mark for each marking point.
- / separates alternative answers.
- Allow error carried forward in calculations.
- Accept any correct, clearly expressed alternative.

Total marks

35

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Forces Worksheet – Mark Scheme (Part 2)

Total: 35 marks. (1) = one mark. Accept any scientifically correct alternative wording.

Section A – What is a force?

Q	Answer	Mark	Guidance
1	(a) push; (b) pull; (c) push; (d) pull	4	1 mark each
2	(a) push, pull (either order); (b) interaction; (c) newtons; (d) newtonmeter; (e) shape	6	1 mark per correct word; kilograms and metres are not used
3(a)	newtonmeter / force meter / spring balance	1	
3(b)	6 N	1	number and unit both needed
3(c)	the spring stretches more / gets longer and the reading gets bigger (more than 6 N)	1	
	Section A total	**13**	

Section B – Contact and non-contact forces

Q	Answer	Mark	Guidance
4	Contact: friction, air resistance, upthrust, water resistance, tension. Non-contact: gravity (weight), magnetic force, electrostatic force.	3	all 8 correct = 3 marks; 6–7 correct = 2 marks; 4–5 correct = 1 mark
5(a)	A: air resistance (accept drag), contact. B: weight / gravity, non-contact.	4	1 mark for each name; 1 mark for each contact / non-contact
5(b)	it acts between two objects that are not touching (the Earth pulls Zara without touching her)	1	
6(a)	arrow on the box pointing to the left (opposite to the movement), labelled friction	1	
6(b)	carpet	1	
6(c)	useful: grip of shoes on the ground / brakes / tyres on a road / holding a pencil (1); problem: wears out shoes, tyres or machine parts / makes moving parts hot / makes it harder to push things (1)	2	any one of each
	Section B total	**12**	

Section C – Force arrows and balanced forces

Q	Answer	Mark	Guidance
7(a)	Team A, because they pull with the bigger force (300 N is more than 200 N / longer arrow)	1	
7(b)	100 N	1	unit needed
7(c)	balanced; the rope does not move / stays still	1	both needed
8	(a) balanced; (b) unbalanced; (c) balanced	3	1 mark each
8(d)	the car speeds up (1); because the forward force (2000 N) is bigger than the backward force (500 N) / the forces are unbalanced (1)	2	
9(a)	air resistance; a contact force	1	both needed
9(b)	there is no air on the Moon, so there is no air resistance; only gravity acts, so both objects fall at the same rate	1	
	Section C total	**10**	

Worksheet total: 35