

CA 2

Methodist Girls' School (Primary)

Science

Continual Assessment 2

2004

Name : _____

Class : Pr 5 . _____

Date : _____

Marks : Section A (30 marks) _____

Section B (20 marks) _____

Total (50 marks) _____

Section A (30 marks)

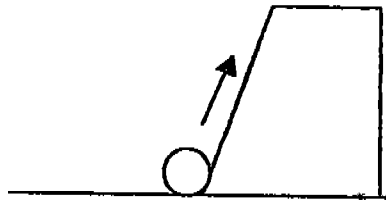
Choose the most suitable answer and write its number in the brackets provided.

1. Which one of the following statements about magnets is true ?

- (1) Magnets attract all metals.
- (2) All magnets have two different poles.
- (3) All metals can be made into magnets.
- (4) The force of magnets cannot pass through plastic. _____ ()

2. The following diagrams show different ways of moving a stone up.
Pick the one that requires the least force to lift the stone.

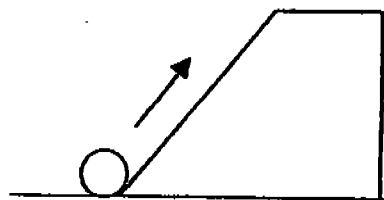
○ stone



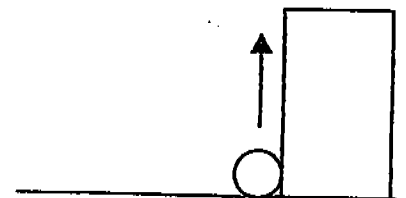
(1)



(2)



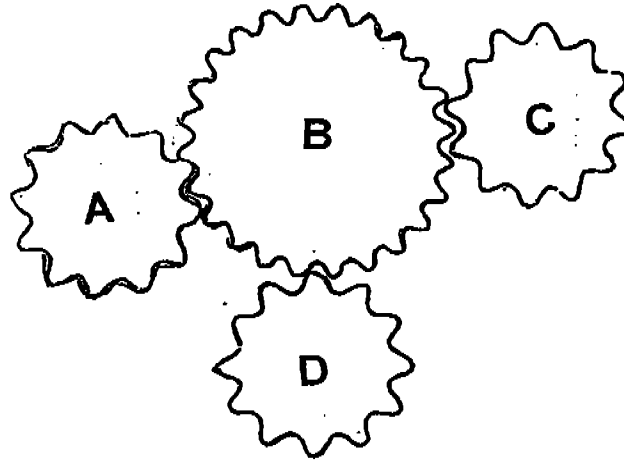
(3)



(4)

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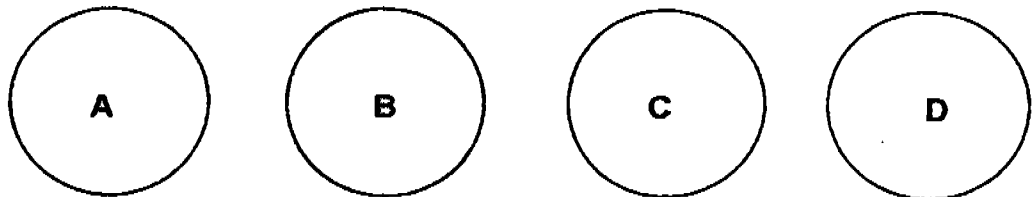
3. The diagram shows four interlocking gears, A, B, C and D.
Which gear will move slowest and in the opposite direction of the others ?



- (1) Gear A
- (2) Gear B
- (3) Gear C
- (4) Gear D

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4. The diagram below shows four balls that are of the same size.
In order to find out which type of ball bounces the highest, what variable must be kept the same ?



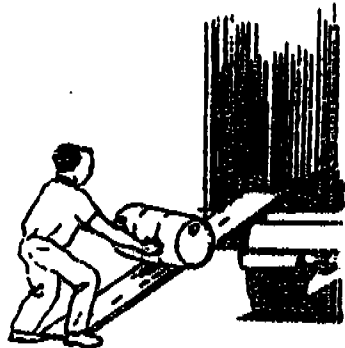
- (1) the mass of each ball
- (2) the colours of the balls
- (3) the materials the balls are made of
- (4) the surface on which the balls are dropped

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5. Which of the following statements is true for two similar gears that are interlocked ?

- (1) Both gears would not move at all.
- (2) Both gears would turn at the same speed.
- (3) Both gears would turn at different speeds
- (4) Both gears would turn in the same direction. ()

6. The picture below shows a man pushing a load onto the truck.



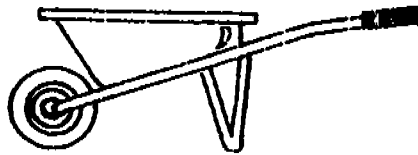
It is easier to load the goods onto the truck because the ramp helps to move heavy loads up with _____ but over _____. Choose the correct answer from groups A and B.

	A	B
1	less effort	a longer distance
2	less effort	a shorter distance
3	same effort	same distance
4	more effort	shorter distance

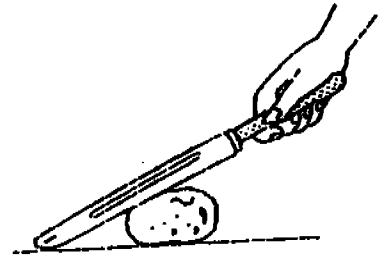
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7. In which one of the pictures is the effort between the load and the fulcrum ?

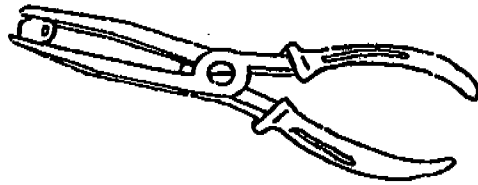
(1)



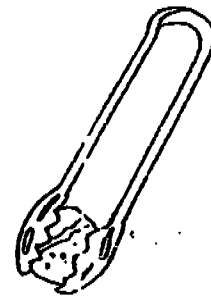
(2)



(3)



(4)

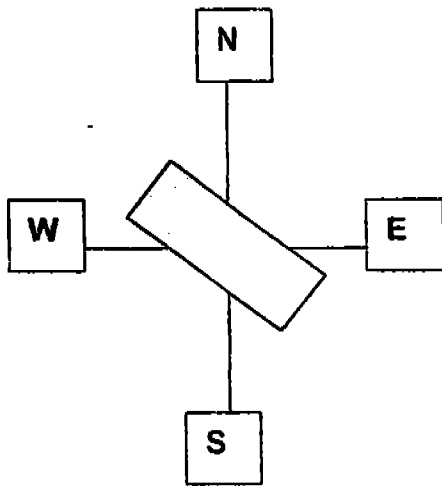


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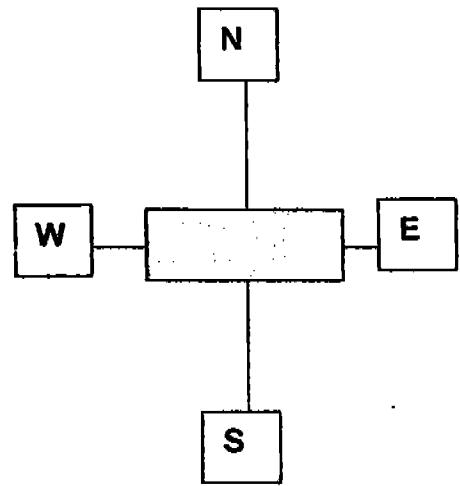
8. Which diagram shows the final position of a freely- suspended magnet ?



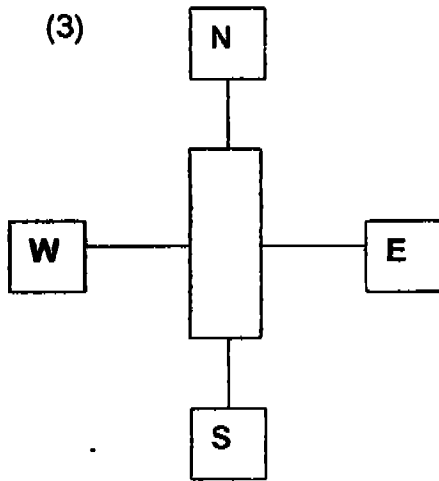
(1)



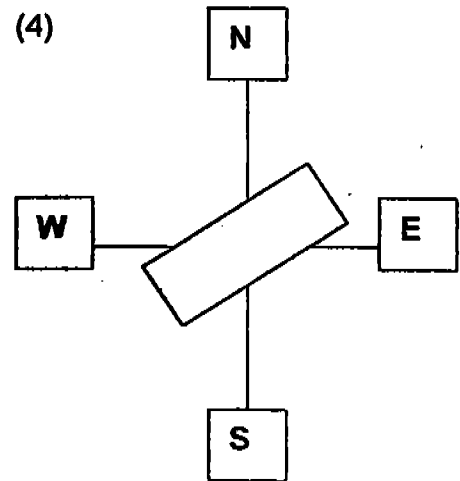
(2)



(3)



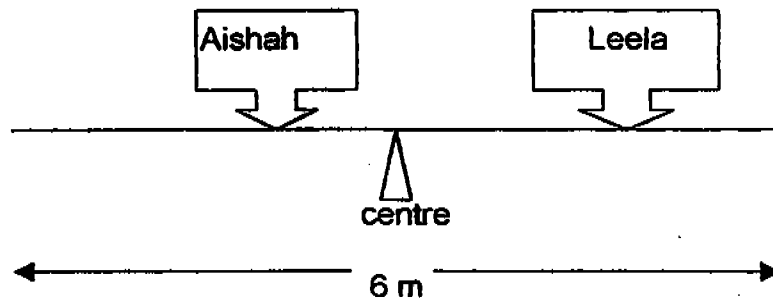
(4)



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9. Two children who had different masses sat on a seesaw. The seesaw was balanced with Aishah on one side and Leela on the other.

Children	Mass
Aishah	20 kg
Leela	10kg



What approximate distances were Aishah and Leela from the centre of the seesaw ?

	Aishah	Leela
1	1m	3m
2	1m	2m
3	2m	2m
4	3m	2m

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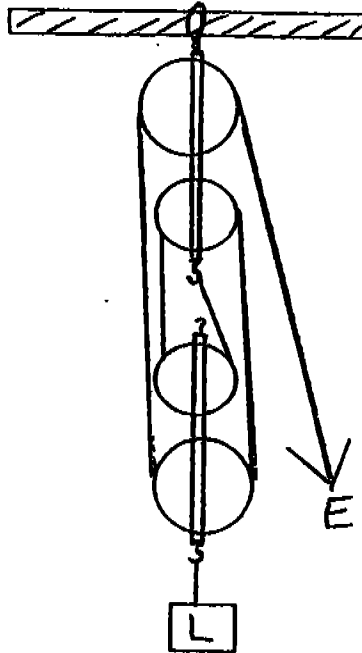
10. Less effort is needed to lift a load in a _____.

A : fixed pulley
 B : movable pulley
 C : pulley system

- (1) A only
 (2) B only
 (3) A and B only
 (4) B and C only

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11. Some students set up a pulley system as shown in the diagram below.



They measured the effort needed to raise different loads and recorded the results in the table below.

Load (g)	Effort (g)
100	25
200	50
500	125
600	?

What is the effort required when the load is 600 g ?

- (1) 150 g
- (2) 250 g
- (3) 300 g
- (4) 350 g

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12. A spring balance needs a spring in order to measure the amount of force exerted by the load.
Why is a spring needed ?

- (1) A spring is hard.
- (2) A spring is made of metal.
- (3) A spring stretches when pulled.
- (4) A spring matches the balance in size.

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13. Which of the following machines is correctly classified ?

	Machines	Examples
1	lever	watch
2	pulley	nutcracker
3	inclined plane	ladder
4	wheel and axle	pliers

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14. Kneading a lump of plasticine causes a change in the _____.

- A: shape of the plasticine
- B: weight of the plasticine
- C: texture of the plasticine
- D: colour of the plasticine

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- (1) A only
- (2) B only
- (3) A and B only
- (4) C and D only

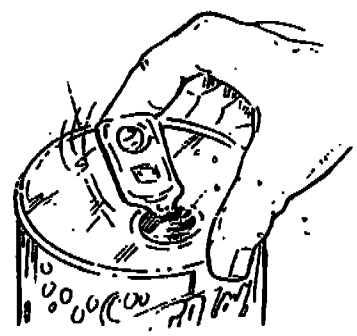
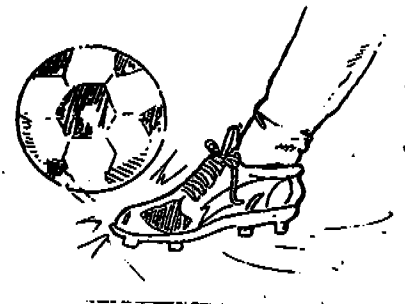
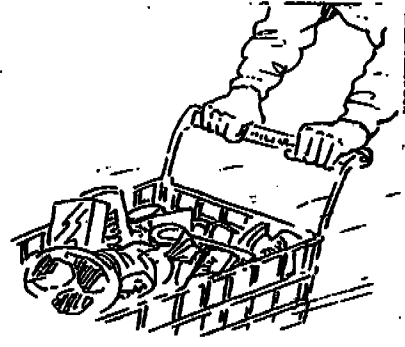
15. Work is not done when you _____.

- (1) close the door
- (2) wipe the dishes dry
- (3) cycle round the track
- (4) push against a brick wall

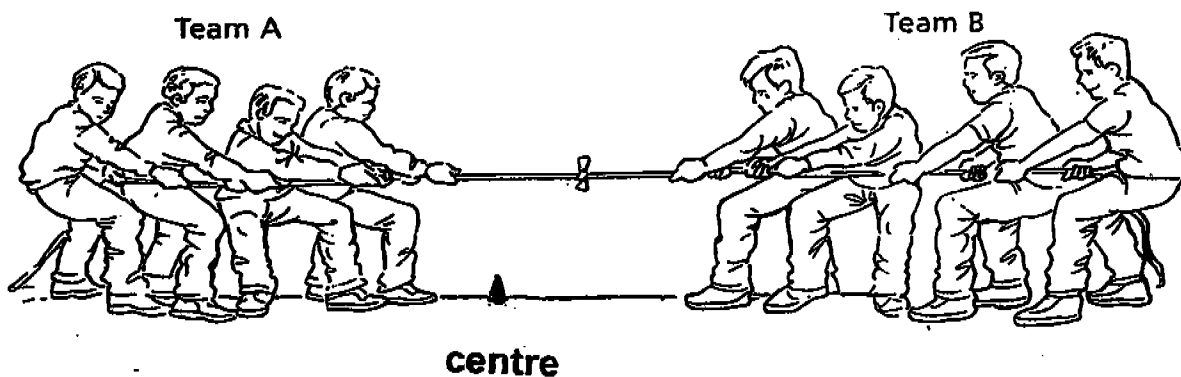
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Section B (20 marks)

16. Look at the pictures below and identify whether a push or pull is causing the movement.
Write ' push ' or ' pull ' in the boxes provided. (4 marks)



17. Two teams of boys are playing a game called 'tug-of-war'



Team _____ is moving backwards because Team _____ is pulling harder than Team _____. The force on one end of the rope is _____ than the force on the other end, so the rope moves towards Team _____.

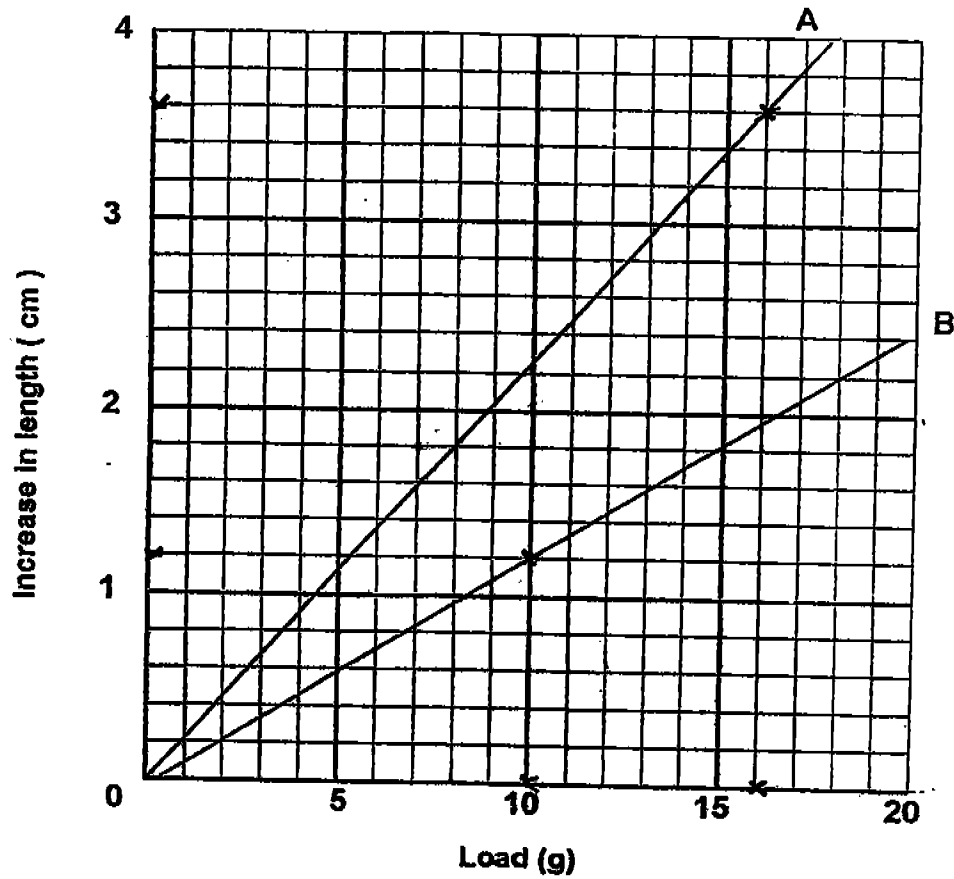
(5 marks)

18.

(a) Name the force that acts on you and everything else on Earth all the time. (1 mark)

(b) Name the force that acts on two pieces of iron or steel causing them to push or pull each other. (1 mark)

19. The graph shows the increase in length of two springs, A and B, when loads are hung on them.

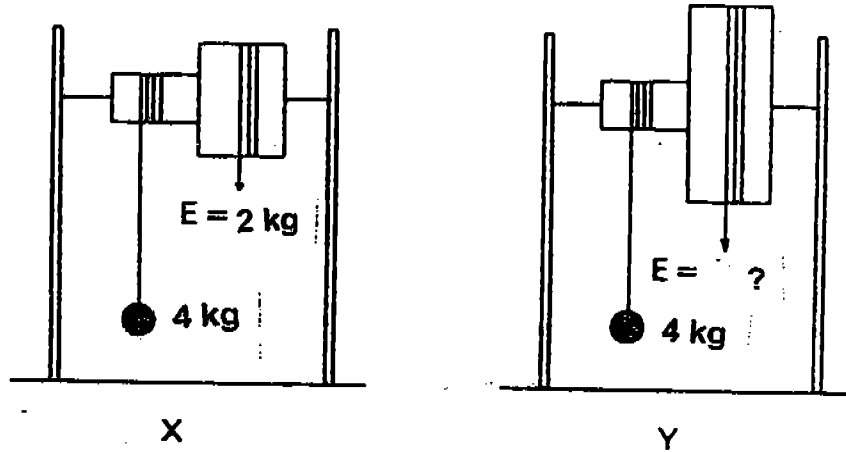


- (a) Study the graph carefully and complete the table below by filling in the empty boxes. (2 marks)

Spring	Load (g)	Increase in length (cm)
A	16	
B		1.2

- (b) Using the information from the graph only, how can you tell that Spring A can be stretched more easily than spring B? (1 mark)

20. Two wheel and axle machines, X and Y, are shown below. The effort, E, in each case is just enough to lift the 4 kg load.



- (a) Estimate the effort needed in Y by circling the correct answer.

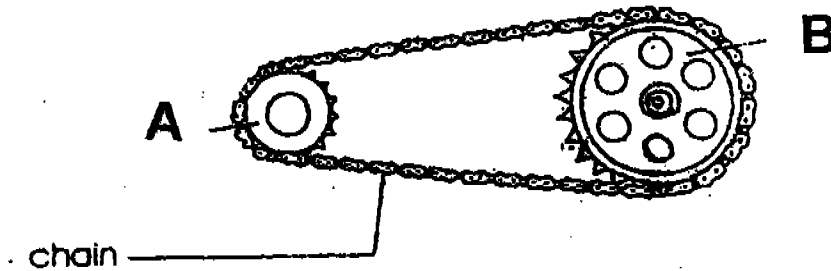
1 kg 100g	3 kg 100g	4 kg 100g
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(1 mark)

- (b) Give a reason for your answer in (a). (1 mark)

- (c) In lifting the load, what is similar about the effort applied in X and Y? (1 mark)

21. The diagram shows gears A and B. Both gears are connected by a chain.



- (a) If gear A turns in clockwise direction, gear B will turn in _____ direction.
(1 mark)
- (b) If gear A has 20 teeth and gear B has 40 teeth, how many turns does gear B make when gear A makes 8 turns ?
(1 mark)
_____ turns
- (c) Which gear turns faster ? (1 mark)

CA2

METHODIST GIRLS SCHOOL (PRIMARY)
CONTINUAL ASSESSMENT 2 - 2004
PRIMARY 5 SCIENCE

- 1) 2 16) push push
- 2) 2 pull pull
- 3) 2 17) B B
- 4) 4 A
- 5) 2 stronger
- 6) 1 B
- 7) 4 18) a) It is the gravitational force.
- 8) 3 b) It is the magnetic force.
- 9) 2 19) a) 3.6
- 10) 4 10
- 11) 1 b) The load on spring A is heavier than the load on Spring B and so Spring A stretches more easily.
- 12) 3
- 13) 3 20) Circle 1 kg 100 g
- 14) 1 b) The bigger the wheel, the less effort is needed.
- 15) 4 c) The effort applied is lighter than the load.
- 21) a) clockwise
- b) 4
- c) Gear A turns faster