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TAKS Practice Test

Grade 2, Chapter 7
Forces and Machines

Name _____

Date _____

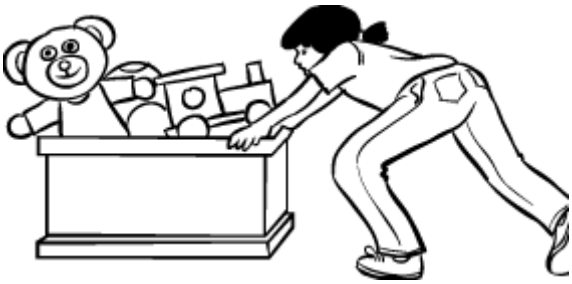
1 What is a force?

- O A kind of energy
- O A push only
- O A pull only
- O A push or a pull

2 When you throw a ball into the air, what force pulls it down?

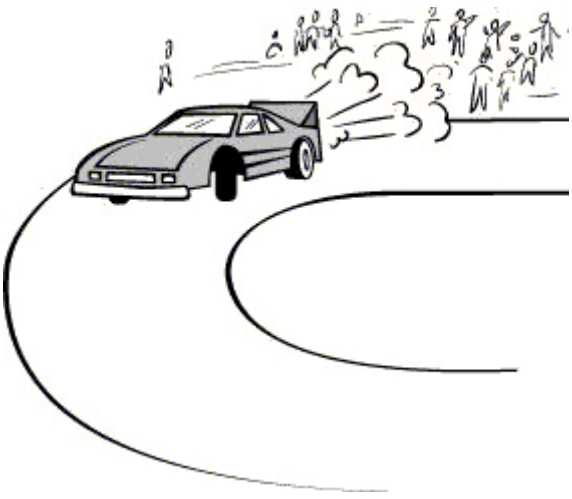
- O Friction
- O A force from sunlight
- O A force from the air
- O Gravity

3 What change would make it easier for the girl to push the box?



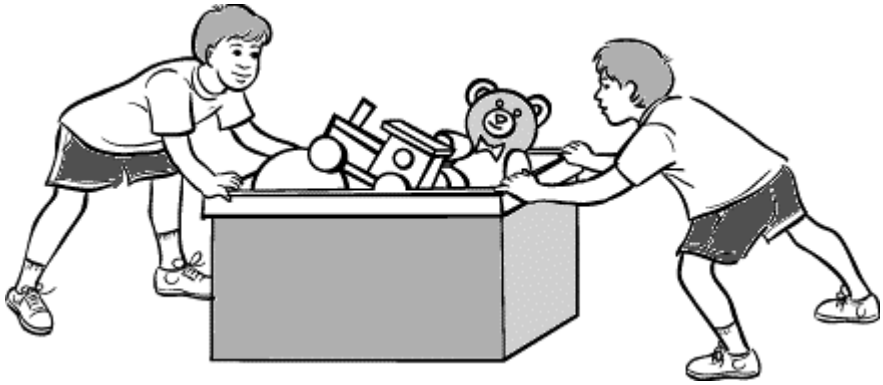
- O Add more toys to the box.
- O Ask a friend to sit on the box.
- O Paint the box a lighter color.
- O Take toys out of the box.

4 A race car turns when its wheels turn. Does the force that moves the race car change?



- O Yes, the force gets weaker.
- O Yes, the direction of the force changes.
- O Yes, the force changes from a push to a pull.
- O No, the force does not change.

Use the pictures to answer Questions 5 and 6.



Two boys are pushing on a box. The boy on the left pushes just as hard as the boy on the right. The box is not moving.

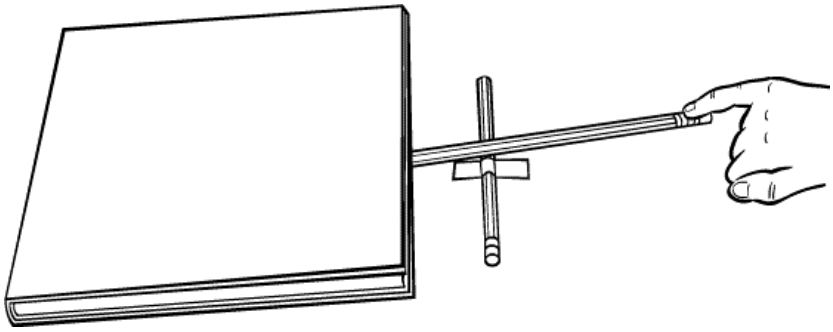
5 How might the boys move the box?

- O Take some toys out of the box.
- O Both boys push harder.
- O Both boys push softer.
- O Both boys push the box from the same side.

6 What if the boy on the right goes away? Only the boy on the left would push the box. Would the box move?

- O Yes, if the force is great enough.
- O Yes, if the force is very small.
- O Yes, if there is no force on the box.
- O No, the box cannot move.

Use the picture to answer Questions 7, 8, and 9.



7 What simple machine is shown here?

- O Lever
- O Fulcrum
- O Ramp
- O Pulley

8 The simple machine makes lifting easier because you need to use _____.

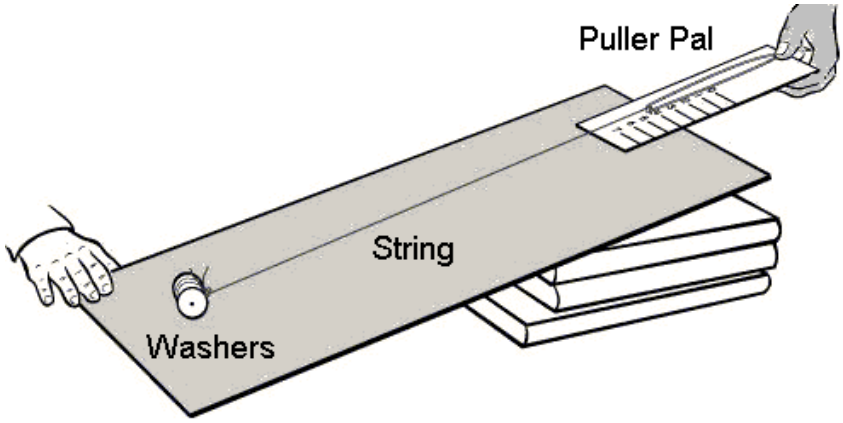
- O more force
- O less force
- O the same amount of force
- O no force at all

9 What uses the same kind of simple machine shown here?

- O Flagpole
- O Seesaw
- O Oven mitt
- O Light bulb

Use the words and picture to answer Questions 10, 11, and 12.

Children pull the washers and string up the board. As they pull, they observe the Puller Pal. Later, they will pull the washers straight up into the air.



10 What does the Puller Pal show?

- O How hard the washers are pulled
- O The weight of the washers
- O The length of the ramp
- O The number of washers tied to the string

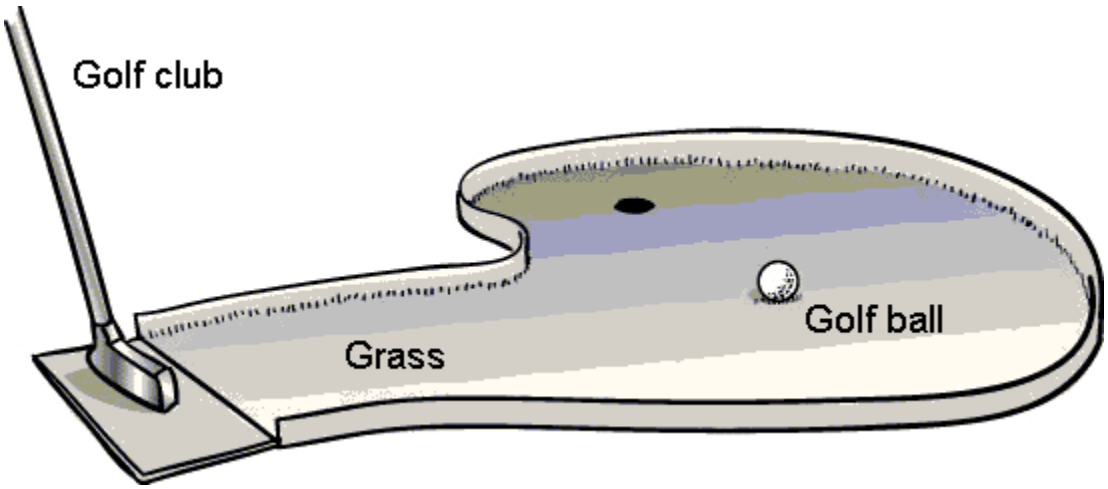
11 What can the children learn from this activity?

- O Washers are too heavy to lift.
- O Friction slows things as they moving.
- O A ramp makes work easier.
- O A lever makes work easier.

12 What change would make the washers easier to lift?

- O Make the board shorter and steeper.
- O Make the board longer and less steep.
- O Make the string thicker.
- O Lift the washers straight up.

Use the picture and words to answer Questions 13 and 14.



13 What tool would you use to measure how far the golf ball rolled?

- O Hand lens
- O Thermometer
- O Microscope
- O Meterstick

14 What force slowed the golf ball as it rolled?

- O Gravity
- O Friction
- O The force from the golf club
- O The force from the golfer

ANSWER KEY and CORRELATIONS:

Question	Answer	TAKS	McGraw-Hill Science Grade 2 textbook
1	A push or a pull	3.6A	p. 148
2	Gravity	3.6A	p. 149
3	Take toys out of the box.	3.6A, 5.5A	p. 152
4	Yes, the direction of the force changes.	3.6A	p. 157
5	Both boys push the box from the same side.	3.6A	p. 157
6	Yes, if the force is great enough.	3.6A	p. 152
7	Lever	3.6A, 5.5A	p. 162
8	less force	5.2C, 3.6A	p. 162
9	Seesaw	3.3B	p. 163
10	How hard the washers are pulled	5.2B, 5.2C	p. 167
11	A ramp makes work easier.	5.2B, 5.2C	p. 167
12	Make the board longer and less steep.	5.2C, 5.2D	p. 169
13	Meterstick	5.8B	p. R11
14	Friction	3.6A	p. 158