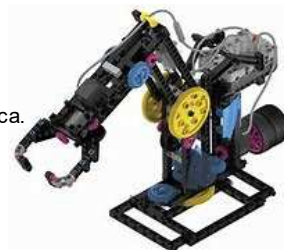




Conquesta 2019

(International Multiple Choice Primary School Olympiads – Est. 1998)
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Senior Robotics – Grades 8 + 9

Welcome to your Conquesta Olympiad. When you have decided which of the answers is correct, scratch out the letter in the matching square on your answer sheet. Example:- If the answer to question 4 is c, then scratch out the letter c in the square containing c next to the number 4 (see example 1 below). If you've made a mistake and b should have been the answer, neatly cross out the mistake and then scratch out b (see example 2 below).

Example 1:-

4.	a	b	c	d
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Example 2:-

4.	a	b	c	d
----	---	--------------	--------------	---

As this paper has been printed in greyscale, the colours of the panels on the icons have been indicated in italics, with arrows pointing to the relevant panels.

BUILDING

1. This beam is correctly named a



- (a) 7 beam
- (b) long beam
- (c) short beam
- (d) holes beam

2. The axle is as long as a four beam.

- (a) one
- (b) two
- (c) three
- (d) four



3. A touch sensor recognises three conditions, namely,, release and bump.

- (a) press
- (b) seen
- (c) sense
- (d) feel

4. The serves as a control centre and power station of your robot.

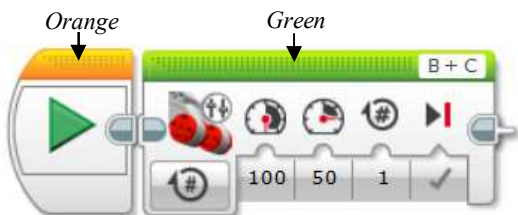
- (a) EV3 brick
- (b) medium motor
- (c) large motor
- (d) small motor

5. The is used as a central shaft for a rotating wheel or for a gear.

- (a) sensor
- (b) axle
- (c) connector
- (d) beam

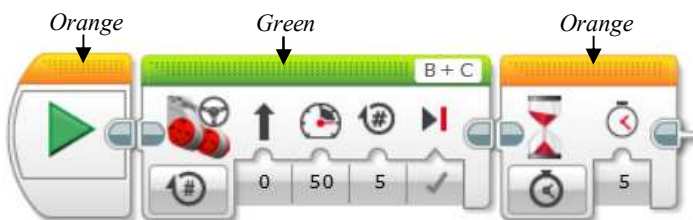
PROGRAMMING

6. In the move icon below, the power settings of the motors indicate that



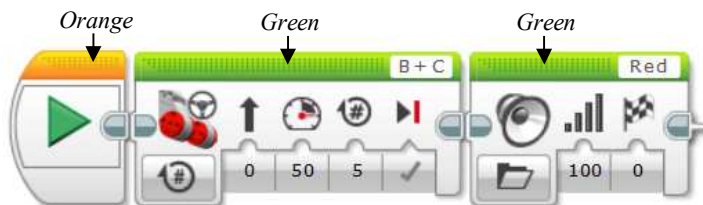
- (a) only the faster wheel will move.
- (b) the robot will not move because the wheels are moving at different speeds.
- (c) the robot will move backwards.
- (d) one wheel will move at a power level of 100 and the other wheel will move at a power level of 50, at the same time for one rotation.

7. The combinations of the two programming icons below indicate that



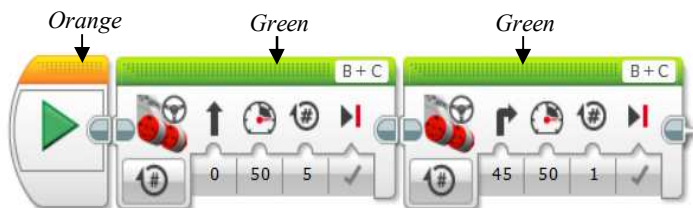
- (a) the robot will move forward for 50 rotations and then pause for 5 seconds.
- (b) the robot will move forward for 5 rotations at 50% power and then pause for 5 seconds.
- (c) the robot will move backwards for 50 rotations and then pause for 5 seconds.
- (d) the robot will move backwards for 0 rotations and then pause for 5 seconds.

8. The two programming icons indicate that



- (a) the robot will move forward for 5 rotations and then say "RED".
- (b) the robot will move forward for 5 rotations and then say "GREEN".
- (c) the robot will follow the red line for 5 rotations.
- (d) the robot will say "RED" 100 times.

9. The combination of the two programming icons below indicate that



- (a) the robot will move forward for 50 rotations and then do a right angle turn to the right.
- (b) the robot will move forward for 5 rotations and then do a right angle turn to the left.
- (c) the robot will move backwards for 5 rotations and then do a right angle turn to the right.
- (d) the robot will move forward for 5 rotations and then do a right angle turn to the right.