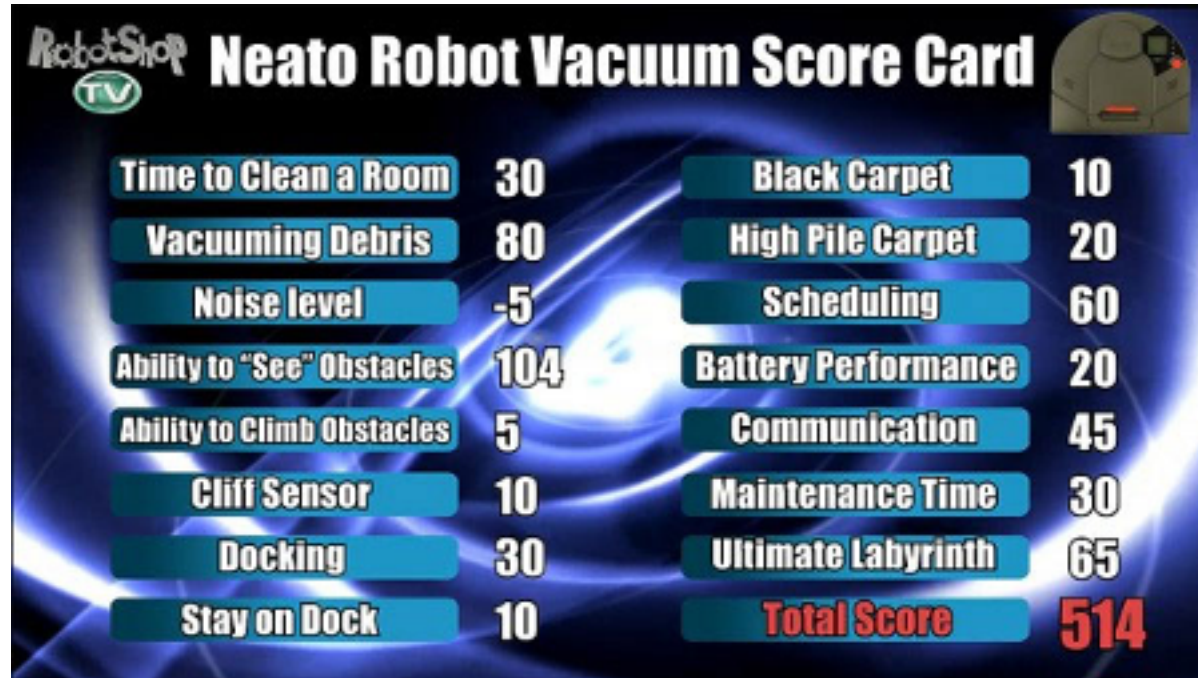


RobotShop Ultimate Challenge - Domestic Vacuum Robots

Robot: Neato XV-11



Challenge 1: Time to Clean a Room

Time: 3 min 45 sec

Total Points: 30

Challenge 2: Vacuuming Debris

Debris type 1: Paper
 Hard Floor
 Total weight of debris: 20g
 Weight of debris picked up: 11g
 % of Debris Vacuumed: 55%
 Points: 0

Carpet
 Total weight of debris: 20g
 Weight of debris picked up: 19.5g
 % of Debris Vacuumed: 98%
 Points: 40

Debris type 2: Nuts and Screws

Hard Floor

Total weight of debris: 140 pieces

Weight of debris picked up: 45 pieces

% of Debris Vacuumed: 32%

Points: 0

Carpet

Total weight of debris: 140 pieces

Weight of debris picked up: 30 pieces

% of Debris Vacuumed: 21%

Points: 0

Debris type 3: Hair and Dirt

Hard Floor

Total weight of debris: 20g

Weight of debris picked up: 11g

% of Debris Vacuumed: 55%

Points: 0

Total Points: 80

Carpet

Total weight of debris: 20g

Weight of debris picked up: 18g

% of Debris Vacuumed: 90%

Points: 40

Challenge 3: Noise Level

Hard Floor

Peak decibel level: 82

Points: -5

Total Points: -5

Carpet

Peak decibel level: 79.3

Points: 0

Challenge 4: Ability to 'See' Obstacles:

Touch/Bump Test (#)

Avoids wall: 8

Soft touch: 7

Hard bump: 5

Points: 89

Curtain Test (check one)

Gets stuck:

Doesn't get stuck: Y

Gets stuck and frees itself:

Points: 10

Electrical Wires (check one)

Gets stuck:

Doesn't get stuck:

Gets stuck and frees itself: Y

Points: 5

Total Points: 104

Challenge 5: Ability to Climb Obstacles

<i>Cliff height:</i> 0.5cm	<i>Cliff height:</i> 1.0cm	<i>Cliff height:</i> 2cm
Climbs: Y	Climbs:	Climbs:
Doesn't climb:	Doesn't climb: Y	Doesn't climb: Y
Gets stuck:	Gets stuck:	Gets stuck:
Points: 5	Points: 0	Points: 0
Total Points: 5		

Challenge 6: Cliff Sensors

Doesn't fall: Y
Gets stuck:
Falls:
Total Points: 10

Challenge 7: Time/tries to return to Dock

Time: 54 sec
of failed docking attempts: 0
of Attempts: 1
Total Points: 30

Challenge 8: Stay on Dock

<i>Distance:</i> 2"	<i>Distance:</i> 12"
Docks in one try: Y	Docks in one try:
Docks in multiple tries:	Docks in multiple tries:
Robot is lost:	Robot is lost: Y
Points: 10	Points: 0
<i>Distance:</i> 36"	
Docks in one try:	
Docks in multiple tries:	
Robot is lost: Y	
Points: 0	
Total Points: 10	

Challenge 9: Black Carpet

Cleans w/o problem: Y
Cleans and gets error:
Doesn't start:
Total Points: 10

Challenge 10: High Pile Carpet

Cleans w/o problem: Y
Cleans and gets error:
Doesn't move properly:
Brushes stop turning:
Total Points: 20

Challenge 11: Scheduling

Scheduling (Y/N): Y	Time: 16 sec
mon, wed, fri	
Scheduled time to program: 2pm	Points: 30
Points: 30	
Total Points: 60	

Challenge 12: Battery

Total run time: 73 min
Time to Clean Room: 3.75 min
Optimal Cleaning Ratio: 19.46
Total Points: 20

Challenge 13: Communicating State and Errors*Jammed Brushes*

No communication:
Beeps:
Displays: Y
Speaks:
Points: 5

Jammed Wheel

No communication:
Beeps:
Displays: Y
Speaks:
Points: 5

Obstructed Cliff Sensors

No communication:

Beeps:

Displays: Y

Speaks:

Points: 5

Particle Bin Full

No communication:

Beeps:

Displays: Y

Speaks:

Points: 5

Battery Dead

No communication:

Beeps:

Displays: Y

Speaks:

Points: 5

Communicates via internet (Y/N): N

Conserves Error with action:

Conserves error without action: Y

Points: 20

Total Points: 45

Challenge 14: Maintenance Time

Time to clean brushes, filter, dustbin: 2 min 36 sec

Total Points: 30

Challenge 15: Ultimate Labyrinth

Completed labyrinth A (Y/N): Y

Time: 55 sec

Points: 25

Total Points: 65

Completed labyrinth B (Y/N): Y

Time: 1 min 25 sec

Points: 20

Grand Total: 514