Question 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 3 text |  | | | |
|  | What force is required to give mass m = 40 kg acceleration a = 2 m/c2 ?  Answer |  |  |  |
| Question 3 answers   |  |  |  | | --- | --- | --- | |  |  | 60 N | |  |  | 80 N | |  |  | 40 N | |  |  | 20 N | |  |  |  |

Question 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 4 text |  | | | |
|  | What force is required to keep mass m = 20 kg  moving with a **constant speed** along straight line?  Answer |  |  |  |
| Question 4 answers   |  |  |  | | --- | --- | --- | |  |  | 100 N | |  |  | 80 N | |  |  | 60 N | |  |  | No force required | |  |  |  |

Question 5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 5 text |  | | | |
|  | Two boxes have the same size, but one box is empty and the other has books inside. The same force is applied to each box. What box will have the bigger acceleration?  Answer |  |  |  |
| Question 5 answers   |  |  |  | | --- | --- | --- | |  |  | Empty box | |  |  | Box with books | |  |  | Boxes will have the same acceleration | |  |  | Impossible to make a conclussion | |  |  |  |

Question 6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 6 text |  | | | |
|  | According to the Second Newton's Law, if you drop the ball it will fall down with acceleration  (because of gravity force). Gravity on a Moon is less than on Earth. If you drop the same ball on the Earth and on the Moon  Answer |  |  |  |
| Question 6 answers   |  |  |  | | --- | --- | --- | |  |  | acceleration on the Earth will be bigger than on the Moon | |  |  | acceleration on the Earth will be less than on the Moon | |  |  | acceleration will be the same on the Earth and on the Moon | |  |  | ball will not fall down on the Moon | |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Question 7 text | |  | |
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|  |  | |  |

Question 8

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 8 text |  | | | |
|  | Gravity force applied to the monitor is 50 N.  Monitor is on a horizontal surface of table and doesn't move. What is the magnitude and direction of surface reaction?  Answer |  |  |  |
| Question 8 answers   |  |  |  | | --- | --- | --- | |  |  | 50 N directed horizontally | |  |  | 50 N directed down | |  |  | 50 N directed up | |  |  | There is no surface reaction because monitor doesn't move | |  |  |  |

Question 9

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 9 text |  | | | |
|  | Imagine a book on the horizontal surface. without motion (at rest). Gravity force pushing the book down with force 10 N, but the book is remaining on the surface without motion (at rest). What is the Net Force applying to the box?  Answer |  |  |  |
| Question 9 answers   |  |  |  | | --- | --- | --- | |  |  | The Net Force is 10 N and directed up | |  |  | The Net Force is 10 N and directed down | |  |  | The Net Force is 20 N | |  |  | The Net Force is zero | |  |  |  |

Question 10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Question 10 text |  | | | |
|  | Following two forces applying to the object: one 30 N to the right (------------------->) another 10 N to the left (<-----) What is the Net Force?  Answer |  |  |  |
| Question 10 answers   |  |  |  | | --- | --- | --- | |  |  | -----> 10 N | |  |  | ----------> 20 N | |  |  | ---------------> 30 N | |  |  | 10 N <----- | |  |  |  |