

Converting Metric Units of Speed

(a)	(b)	(c)	(d)																																
<p style="text-align: center;">Convert 54 km/h to m/s</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>54 km</td><td>1 hour</td></tr> <tr><td>54000 m</td><td>1 hour</td></tr> <tr><td>900 m</td><td>1 minute</td></tr> <tr><td>15 m</td><td>1 second</td></tr> </table>	54 km	1 hour	54000 m	1 hour	900 m	1 minute	15 m	1 second	<p style="text-align: center;">Convert 90 km/h to m/s</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>90 km</td><td>1 hour</td></tr> <tr><td>90000 m</td><td>1 hour</td></tr> <tr><td>1500 m</td><td>1 minute</td></tr> <tr><td>25 m</td><td>1 second</td></tr> </table>	90 km	1 hour	90000 m	1 hour	1500 m	1 minute	25 m	1 second	<p style="text-align: center;">Convert 45 km/h to m/s</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>45 km</td><td>1 hour</td></tr> <tr><td>45000 m</td><td>1 hour</td></tr> <tr><td>750 m</td><td>1 minute</td></tr> <tr><td>12.5 m</td><td>1 second</td></tr> </table>	45 km	1 hour	45000 m	1 hour	750 m	1 minute	12.5 m	1 second	<p style="text-align: center;">Convert 126 km/h to m/s</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>126 km</td><td>1 hour</td></tr> <tr><td>126000 m</td><td>1 hour</td></tr> <tr><td>2100 m</td><td>1 minute</td></tr> <tr><td>35 m</td><td>1 second</td></tr> </table>	126 km	1 hour	126000 m	1 hour	2100 m	1 minute	35 m	1 second
54 km	1 hour																																		
54000 m	1 hour																																		
900 m	1 minute																																		
15 m	1 second																																		
90 km	1 hour																																		
90000 m	1 hour																																		
1500 m	1 minute																																		
25 m	1 second																																		
45 km	1 hour																																		
45000 m	1 hour																																		
750 m	1 minute																																		
12.5 m	1 second																																		
126 km	1 hour																																		
126000 m	1 hour																																		
2100 m	1 minute																																		
35 m	1 second																																		
<p style="text-align: center;">Convert 10 m/s to km/h</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>10 m</td><td>1 second</td></tr> <tr><td>600 m</td><td>1 minute</td></tr> <tr><td>36000 m</td><td>1 hour</td></tr> <tr><td>36 km</td><td>1 hour</td></tr> </table>	10 m	1 second	600 m	1 minute	36000 m	1 hour	36 km	1 hour	<p style="text-align: center;">Convert 2.5 m/s to km/h</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>2.5 m</td><td>1 second</td></tr> <tr><td>150 m</td><td>1 minute</td></tr> <tr><td>9000 m</td><td>1 hour</td></tr> <tr><td>9 km</td><td>1 hour</td></tr> </table>	2.5 m	1 second	150 m	1 minute	9000 m	1 hour	9 km	1 hour	<p style="text-align: center;">Convert 30 m/s to km/h</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>30 m</td><td>1 second</td></tr> <tr><td>1800 m</td><td>1 minute</td></tr> <tr><td>108000 m</td><td>1 hour</td></tr> <tr><td>108 km</td><td>1 hour</td></tr> </table>	30 m	1 second	1800 m	1 minute	108000 m	1 hour	108 km	1 hour	<p style="text-align: center;">Convert 7.5 m/s to km/h</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>7.5 m</td><td>1 second</td></tr> <tr><td>450 m</td><td>1 minute</td></tr> <tr><td>27000 m</td><td>1 hour</td></tr> <tr><td>27 km</td><td>1 hour</td></tr> </table>	7.5 m	1 second	450 m	1 minute	27000 m	1 hour	27 km	1 hour
10 m	1 second																																		
600 m	1 minute																																		
36000 m	1 hour																																		
36 km	1 hour																																		
2.5 m	1 second																																		
150 m	1 minute																																		
9000 m	1 hour																																		
9 km	1 hour																																		
30 m	1 second																																		
1800 m	1 minute																																		
108000 m	1 hour																																		
108 km	1 hour																																		
7.5 m	1 second																																		
450 m	1 minute																																		
27000 m	1 hour																																		
27 km	1 hour																																		
<p style="text-align: center;">(i)</p> <p>A car is travelling at 14 m/s. The speed limit is 50 km/h. Is the car breaking the speed limit? You must show your working.</p> <p style="text-align: center; color: red;">$14 \times 60 \times 60 \div 1000 = 50.4 \text{ km/h}$ so is breaking the speed limit</p>	<p style="text-align: center;">(j)</p> <p>A lorry travels at x km/h. Find an expression for the speed of the motorbike in metres per second.</p> <p style="text-align: center; color: red;">$\frac{1000x}{3600} = \frac{5x}{18}$</p>																																		

--	--