



- 1) If I multiply this number by 10, it becomes **3190**.  
 The digits move **one** place to the **left**.  
 If I multiply this number by 100, it becomes **31 900**.  
 The digits move **two** places to the **left**.  
 If I multiply this number by 1000, it becomes **319 000**.  
 The digits move **three** places to the **left**.

2)

<b>Planets</b>	$83 \times 100$	$403 \times 10$	$612 \times 100$	$5604 \times 10$	$87 \times 1000$	$902 \times 1000$
<b>Moons</b>	4030	56 040	8300	87 000	902 000	61 200

- 1) *Javine should have said that the digits move three places to the left. If you are multiplying a decimal number by 1000, for example,  $2.5 \times 1000$ , adding three zeros results in 2.5000. If any columns on the right of the digits have become empty, they will need a place holder.*



*Kian's method is correct as  $10 \times 10 \times 10 = 1000$ . It is the same as multiplying by 1000.*

- 2) *Juno – 102 650km, Athena – 10 265km, Ceres – 2 053 000km, Vesta – 102 650km, Apollo – 1 026 500km, Vulcan – 20 530km*
- 3)  $763 \times 10 = 7630$   
 $7630 + 250 = 7880$   
*She has travelled 7880 steps.*

- 1) *The crater is either 242 steps or 414 steps away from the shuttle.*
- 2) *Possible solutions include the following:*  
 $A = 320 \quad B = 32$   
 $A = 650 \quad B = 65$   
 $A = 850 \quad B = 85$   
*(B should be 10 times bigger than A.)*
- 3) *Possible solutions include the following:*  
 $A = 45 \quad B = 44\,700$   
 $A = 65 \quad B = 64\,700$   
 $A = 82 \quad B = 81\,700$

