

Name : \_\_\_\_\_

## Surface Areas and Volumes

Sheet 1

A) Complete the table.

	Surface Area of figure A	Scale factor of A to B	Ratio of Surface Areas	Surface Area of figure B
1)	162 ft <sup>2</sup>	9 : 1		
2)	8.47 in <sup>2</sup>	1.1 : 6		
3)	302.76 yd <sup>2</sup>	8.7 : 0.5		
4)	1,024 in <sup>2</sup>	4 : 3.7		
5)	20 ft <sup>2</sup>	2 : 3		
6)	1,250 yd <sup>2</sup>	5 : 7		

B) Complete the table.

	Volume of figure P	Scale factor of P to Q	Ratio of Volumes	Volume of figure Q
1)	4.096 yd <sup>3</sup>	1 : 5		
2)	140.608 ft <sup>3</sup>	5.2 : 2.9		
3)	85.75 in <sup>3</sup>	3.5 : 9		
4)	10,290 yd <sup>3</sup>	7 : 2		
5)	1,200 in <sup>3</sup>	2 : 4.3		
6)	3,645 ft <sup>3</sup>	9 : 8		

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**Answer key****Surface Areas and Volumes**

Sheet 1

A) Complete the table.

	Surface Area of figure A	Scale factor of A to B	Ratio of Surface Areas	Surface Area of figure B
1)	162 ft <sup>2</sup>	9 : 1	<b>81 : 1</b>	<b>2 ft<sup>2</sup></b>
2)	8.47 in <sup>2</sup>	1.1 : 6	<b>1.21 : 36</b>	<b>252 in<sup>2</sup></b>
3)	302.76 yd <sup>2</sup>	8.7 : 0.5	<b>75.69 : 0.25</b>	<b>1 yd<sup>2</sup></b>
4)	1,024 in <sup>2</sup>	4 : 3.7	<b>16 : 13.69</b>	<b>876.16 in<sup>2</sup></b>
5)	20 ft <sup>2</sup>	2 : 3	<b>4 : 9</b>	<b>45 ft<sup>2</sup></b>
6)	1,250 yd <sup>2</sup>	5 : 7	<b>25 : 49</b>	<b>2,450 yd<sup>2</sup></b>

B) Complete the table.

	Volume of figure P	Scale factor of P to Q	Ratio of Volumes	Volume of figure Q
1)	4.096 yd <sup>3</sup>	1 : 5	<b>1 : 125</b>	<b>512 yd<sup>3</sup></b>
2)	140.608 ft <sup>3</sup>	5.2 : 2.9	<b>140.608 : 24.389</b>	<b>24.389 ft<sup>3</sup></b>
3)	85.75 in <sup>3</sup>	3.5 : 9	<b>42.875 : 729</b>	<b>1,458 in<sup>3</sup></b>
4)	10,290 yd <sup>3</sup>	7 : 2	<b>343 : 8</b>	<b>240 yd<sup>3</sup></b>
5)	1,200 in <sup>3</sup>	2 : 4.3	<b>8 : 79.507</b>	<b>11,926.05 in<sup>3</sup></b>
6)	3,645 ft <sup>3</sup>	9 : 8	<b>729 : 512</b>	<b>2,560 ft<sup>3</sup></b>