



## Multiple Choice

1) If the lengths of a geometrical shape are multiplied by a scale factor of  $2y^2$ , then the surface area of the new shape will be multiplied by a scale factor of

- a)  $2y^2$                       b)  $8y^6$                        c)  $4y^4$                       d)  $4y^2$

2) Find the dilated coordinates of  $(8, 2)$ , when the center of dilation is at the origin and the scale factor is 3.

- a)  $(24, 6)$

- d)  $(-6, -24)$

3) A and B are similar cubes. The side length of A is 2 units and the side length of B is 16 units. Determine the ratio of the surface areas of A and B. How much larger is the surface area of B?

- a) 8 times

- d) 4 times

4) The volumes of similar solids are in the ratio  $1:216$ . Determine the ratio of their surface areas.

- a)  $1:216$

- d)  $1:36$

5) Find the scale factor of a dilation that maps a square with side length 25 to a square with side length 49.

- a)  $7:5$

- b)  $125:243$

- c)  $5:7$

- d)  $49:25$

6)  $(24, 20)$  is the dilated point of  $(3z, 5)$ . Determine the value of  $z$ , when the center of dilation is at the origin.

- a) 4

- b) 2

- c) 6

- d) 8

