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| **1.** | The height and radius of a cylinder are both enlarged by the same factor. The  volume of the new cylinder is 216 times the volume of the original cylinder.  By what factor were the original height and the original radius enlarged? |

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|  | **2.** | Each side of triangle A is 12 inches long. Each side of triangle B is 18 inches  long. The area of triangle B is about 52.5 square inches (in2). What is the  approximate area of triangle A? |

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|  | **3.** | Each dimension of a rectangle is reduced by a factor of 1/6. The area of  the rectangle is multiplied by what factor? |

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|  | **4.** | Kelly is building a fence to enclose a circular yard. Jake increases  each dimension of the fence he is building by a factor of 4. As a  result of the increase, the **area** that is enclosed by the fence will increase  by what factor? |

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|  | **6.** | The radius of a circle is enlarged by a factor of 5. By what factor is the  circumference of the circle enlarged? |

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|  | **7.** | Harriet has a cube-shaped gift box with sides measuring 4 inches.  The volume of the gift box is 64 in3. The gift she wants to fit in the  box is too large, so she must use a cube-shaped box with sides that  are twice as long. What is the volume of the larger box? |

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|  | **8.** | Orion plans to build a circular pool with either a 30-foot (ft) radius or a  15-ft radius, as shown below.  ircular pool  The cost of a cement path around the edge of the pool depends on the  circumference of the pool. If the materials for the path around the 30-ft radius pool  cost $150, what would be the cost of the materials for the path around the  15-ft radius pool? |

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