

Name: _____ Date: _____ Class: _____

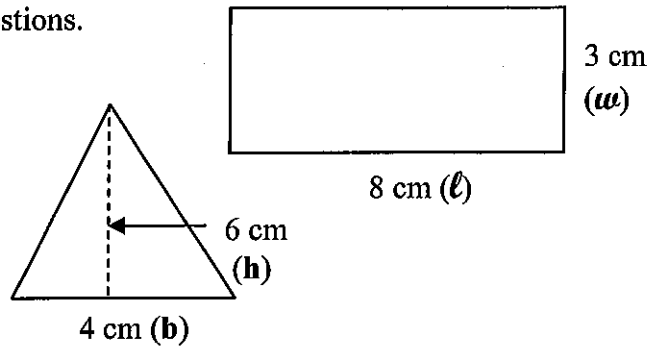
Changing Dimensions Homework – Math 8

Day 1

Use the figures to the right to answer the following questions.

1. **What is the area of the original rectangle?**

2. **What is the area of the original triangle?**



3. **What would happen to the area of the original rectangle if you double the width?**

The new width would be _____ cm and the length would be 8 cm.

What is the new area of the rectangle? _____

The new area of the rectangle would be $\left(\frac{\text{new}}{\text{original}}\right)$ _____ times larger than the original.

4. **What would happen to the area of the original triangle if you triple the base?**

The new base would be _____ cm and the height would be 6 cm.

What is the new area of the triangle? _____

The new area of the triangle would be $\left(\frac{\text{new}}{\text{original}}\right)$ _____ times larger than the original.

5. **What would happen to the area of the original rectangle if you double the width, triple the length?**

The new width would be _____ cm and the new length would be _____ cm.

What is the new area of the rectangle? _____

The new area of the rectangle would be $\left(\frac{\text{new}}{\text{original}}\right)$ _____ times larger than the original.

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6. **What would happen to the area of the original triangle if you double the height, multiply the base by 4?**

The new height would be _____ cm and the new base would be _____ cm.

What is the new area of the triangle? _____

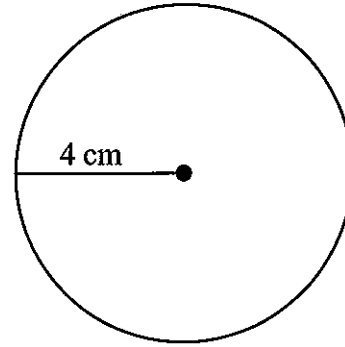
The new area of the triangle would be $\left(\frac{\text{new}}{\text{original}}\right)$ _____ times larger than the original.

7. **How could you change the dimensions of the prism to increase the area so that it is 12 times larger than the original? Please give two possibilities.**

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Use the circle to the right to answer the following questions.



8. **What is the area of the original circle?**

9. **What would happen to the area of the original circle if you triple the radius?**

The new radius will be _____ cm.

What is the new area of the circle? _____

The new area of the circle would be _____ times larger than the original.

10. **What would happen to the area of the original circle if you double the radius?**

The new radius will be _____ cm.

What is the new area of the circle? _____

The new area of the circle would be _____ times larger than the original.

11. **What would happen to the area of the original figure if you multiply the radius by 4?**

The new radius will be _____ cm.

What is the new area of the circle? _____

The new area of the circle would be _____ times larger than the original.

12. **How can you change the radius of the circle to increase the area by a factor of 25? By a factor of 49?**

Factor of 25? Radius = _____

Factor of 49? Radius = _____