

Student Name: _____

1. Alice owns 3 dogs, each of which weighs 35 pounds. After buying a cat, the average weight of her 4 pets becomes 30 pounds. How many pounds does Alice’s cat weigh?

Answer: _____

2. $A + B + C + D = 36$, and $A - 2 = B + 2 = C \div 2 = D \times 2$. What is C?

Answer: _____

3. A school has 6 periods and must teach math, gym, art, science, history, and English in these 6 periods. If math can only be taught in period 1, 2 or 3, and gym can only be taught in period 4, 5 or 6, how many ways are there to schedule the classes?

Answer: _____

4. A circular pizza with diameter 10” costs \$20. If all pizzas were to have the same cost to area ratio, then what should be the cost of a square pizza with side length 12” (exact answer or rounded to 2 decimal places)?

Answer: _____

5. A triangle has integer side lengths and perimeter 24. If one side is twice as long as another side, what is the length of the third side?

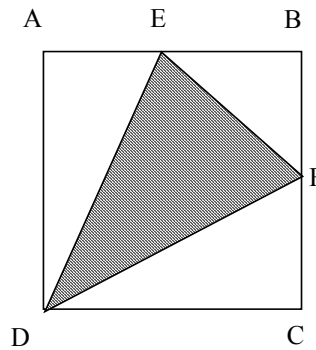
Answer: _____

6. A bucket filled with water has total weight 10 kg, and 99% of this total weight comes from water. After a while, some water evaporates so that only 98% of the total weight now comes from water. What is the total weight of the bucket of water now?

Answer: _____

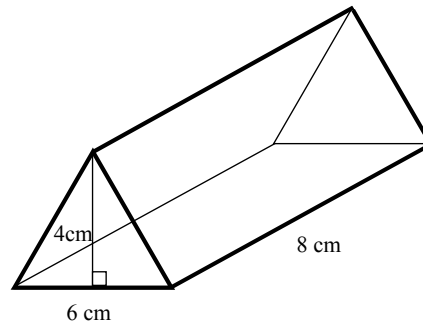
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7. In the figure, E is the midpoint of AB, and F is the midpoint of BC. What fraction of the entire square is shaded?



Answer: _____

8. In the diagram below, assuming the triangles are isosceles, what is the surface area of the triangular prism?



Answer: _____ cm^2