

Unit 2 Problem Set

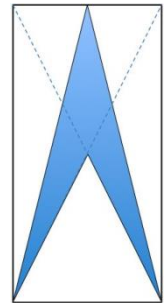
3 marks each + 3 marks for proper mathematical form

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1. Mr. Taylor loves pie. On the first day he eats half of the pie. On the second day he eats one third of the remaining part of the pie. On the third day he eats one quarter of what's left and on the fourth day he eats one fifth of what remains. He stops eating after that because the pie is not fresh any more. What fraction of the original pie still remains?



2. The arrow top is at the midpoint of the edge of the rectangle. What fraction of the rectangle is shaded?



3. The symbol $N!$ is called factorial notation and represents the product of the first N integers. For example $5! = 5 \times 4 \times 3 \times 2 \times 1$. Determine the value of N for which the following statement is true: $3! 4! 7! = 2 (N!)$
4. The height h of water in a cylindrical container with a radius of 5 cm is equal to 10 cm. To measure the shape of a complicated shape it can be placed in water. If the height of the water inside the container rises to 13.2 cm when a stone is placed inside, determine the volume of the stone in cubic cm.

