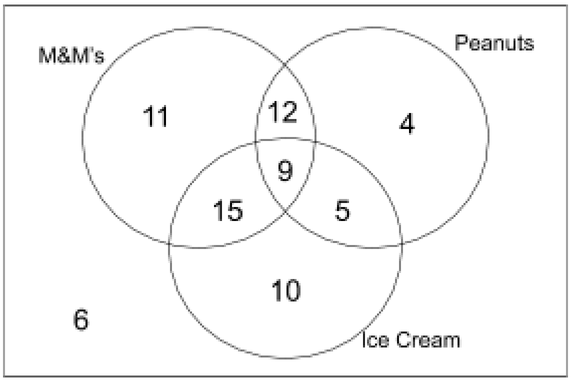
1. **(T4.2, N, CA)** Grecko's Coffee stand kept track of how many Vanilla Freezes they sold each day for a month. The results are as follows: 28, 27, 27, 27, 29, 27, 26, 26, 28, 28, 32, 26, 26, 27, 28, 30, 32, 31, 28, 28, 27, 32, 31, 30, 33, 31, 27, 25, 26, 25. *(Oxford, 8.1 p.256)*
    a. Is this data discrete or continuous?
    b. Draw a histogram displaying the results of this data.
    c. Draw a box and whisker plot for the data set.

2. **(T2.6, R, CI)** Given the quadratic equation $f(x)=2(x+1)^2-8$; *(Oxford, 2.1 p.34)*
    a. Find the inverse of $f(x)$ (that is, find $f^{-1}(x)$).
    b. Rewrite $f(x)$ in standard form.
    c. Hence, determine the discriminant of $f(x)$. Explain what this number means about $f(x)$.
    d. Solve the equation $f(x)=0$.
    e. On what interval is the function $f(x)$ increasing?

3. **(T3.2, E, CA)** Given a triangle $\triangle DEF$, with angle $D=60^\circ$, side $e=9$ and side $f=12$. Solve $\triangle DEF$ and finds its area. *(Oxford, 11.6 p.389)*

4. **(T4.6, R, CI)** Students in Mr. Webb's class were sent a survey asking whether they like or dislike certain snacks. The results are pictured below. *(Oxford, 3.2 p.68)*

    a. How many students responded to the survey?
    b. How many students like M&M's and peanuts?
    c. What is the probability that a randomly selected student likes only ice cream?
    d. What is the probability that a randomly selected student likes all three snacks, given that her or she likes peanuts?
    e. What is the probability that a randomly selected student likes <u>only</u> M&M's, given that he or she does NOT like ice cream?



5. **(T2.8, R, CA)** Given the function $f(x)=2+\frac{1}{2x-5}$, *(Oxford, 5.3, p.147)*
    a. Write down the equation of each of the asymptotes,
    b. Determine the value of each of the intercepts,
    c. Sketch the curve of *f* for $-3 \le x \le 5$, showing the asymptotes and intercepts.

6. **(T.2.9, R, CI)** Solve these equations for x. *(Oxford, 4.3 p.109)*

    i. $2^x=32$ ii. $3^{1-2x}=243$ iii. $3^{x^2-2x}=27$ iv. $5^{2x-1}-25=0$ v. $7^{1-x}=\frac{1}{49}$

7. **(T2.6, R. CA)** A farmer wants to build a rectangular pasture for his sheep. He has exactly 100 meters of fencing. *(Oxford, 2.5 p.53)*
    a. If the garden is *x* meters wide, find the length and the area of the garden in terms of *x*. Find the width of a garden with an area of 525 m^2.
    b. Find the dimensions of the configuration with the maximum possible area.