1) Joe and Jamaal share a bag of sweets between them in the ratio of 2:5. Jamaal is sneaky and gets 18 more sweets than Joe. How many sweets does Jamaal get?

2) Calculate the area of the sector.

3) Solve \( x^2 - 5x - 14 = 0 \)

4) Construct a perpendicular line to the point p.

5) Shannon is surveying students on their mode of transport to school. Design a suitable data collection sheet for Shannon to use.

6) Calculate the size of the angle x.

7) Expand and simplify \( (\sqrt{7} + 6)(\sqrt{7} - 3) \)

8) y is proportional to \( x^2 \) when \( y = 20 \) and \( x = 4 \). Calculate the value of y when \( x = 6 \).

9) The length of a field is 216m, to the nearest metre. The width of the field is 180m, to the nearest 10 metres. Calculate is the upper bound for the area of the field.

10) Express \( x^2 + 8x + 12 \) in the form \( (x + p)^2 + q \).

11) Ahmed buys \( x \) amount of energy drinks. Lucas buys double the amount of energy drinks to Ahmed. Danny buys 1 less energy drink than Lucas. Together they buy 34 Energy drinks. How many do they each buy?

12) Chloe makes a fruit salad with 1kg of oranges and 3kg of apples, which cost her £4. Another day she made a fruit salad with 3kg of oranges and 2kg of apples which cost her £5. How much does 1kg of each type of fruit cost?

13) Calculate the size of angle x. Give a reason for your answer.

14) Shade in the region (R) which satisfies the following inequalities.

15) Simplify \( \frac{45x^7y^5}{5x^3y} \)

16) Calculate the perimeter of the shape.

17) In a stratified sample of 80 students, how many children should be selected from each year group?

<table>
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<th>Year</th>
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<th>5</th>
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<td>132</td>
<td>121</td>
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Challenge

Make \( x \) the subject of the formula.

\[ y(z - x) = zx + y \]