
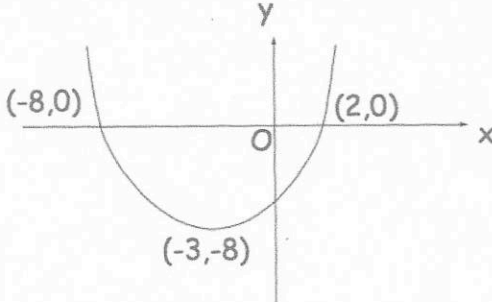
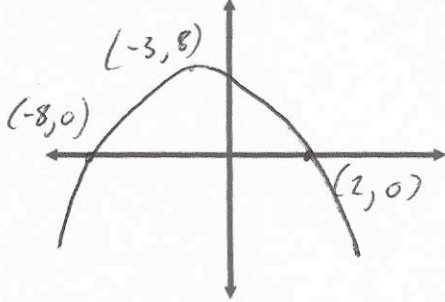
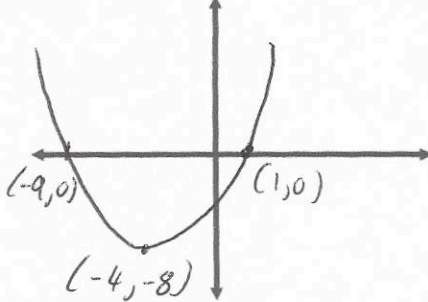


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| <p><b>6th January</b></p> <p>Solve the simultaneous equations</p> $2y - x + 3 = 0 \quad zy + 3 = x$ $x^2 + xy = 0 \quad (zy + 3)(zy + 3) + y(zy + 3) = 0$ $4y^2 + 6y + 6y + 9 + zy^2 + 3y = 0$  | <p style="text-align: right;"><br/>Corbettmaths</p> $6y^2 + 15y + 9 = 0$ $2y^2 + 5y + 3 = 0$ $(2y + 3)(y + 1) = 0$ $y = -\frac{3}{2} \quad \text{or} \quad y = -1$ $x = 0 \quad x = 1$ |
| <p>Shown is a sketch of the graph <math>y = f(x)</math>.</p> <p>(a) Sketch <math>-f(x)</math><br/>(b) Sketch <math>f(x + 1)</math></p> <p>Label known coordinates</p>   |   |
|   |    |
| <p>The line <math>l_1</math> has equation <math>y = 4x - 10</math>.<br/>The line <math>l_2</math> has equation <math>x + y = 20</math></p> <p>The lines <math>l_1</math> and <math>l_2</math> intersect at the point C.</p> <p>The lines <math>l_1</math> and <math>l_2</math> cross the line <math>y = 2</math> at the points A and B.</p> | <p>Find the area of triangle ABC.</p> $C = (6, 14)$ $A = (3, 2)$ $B = (18, 2)$ $\text{Area} = \frac{1}{2} \times 15 \times 12 = 90 \text{ units squared}$   |
| <p>A circle has equation <math>x^2 + y^2 = 100</math> Centre <math>(0, 0)</math></p> <p>Find the equation of the tangent to the circle at the point <math>(6, 8)</math></p> <p>gradient of radius <math>\frac{8}{6} = \frac{4}{3}</math></p>  | $y = -\frac{3}{4}x + c$ $8 = -4.5 + c$ $12.5 = c$ $y = -\frac{3}{4}x + 12.5$  |