
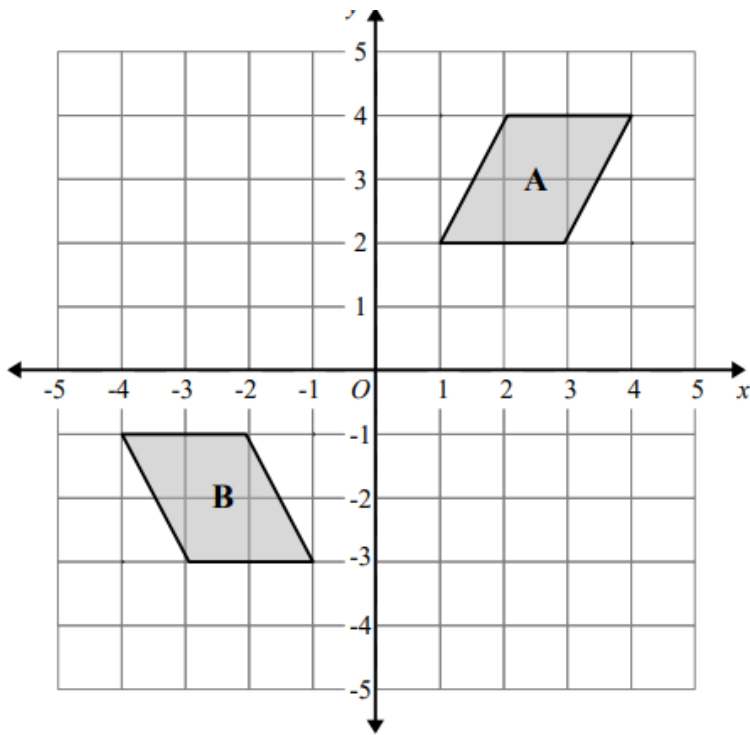
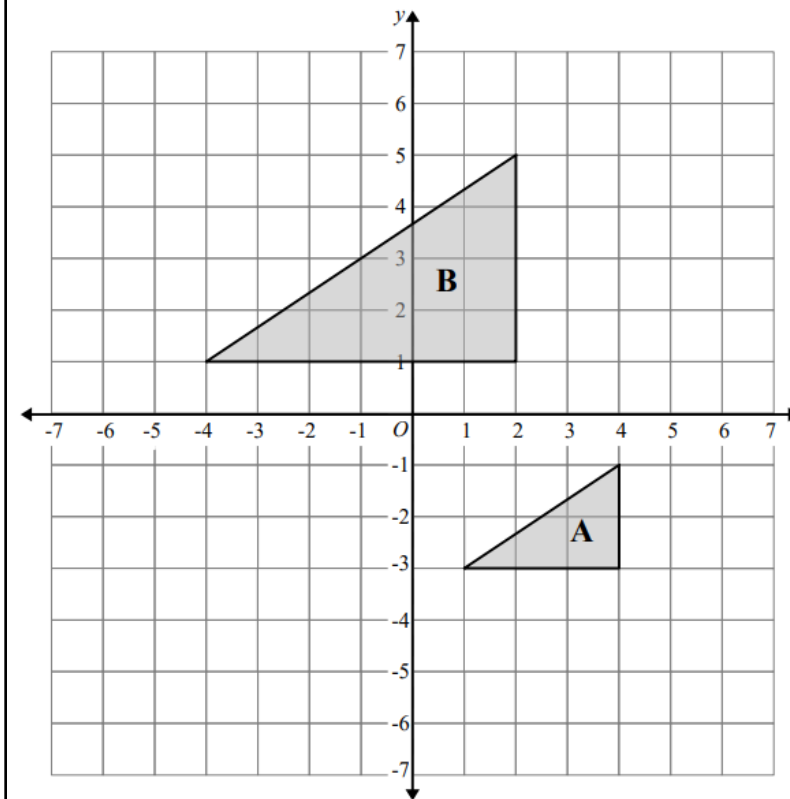
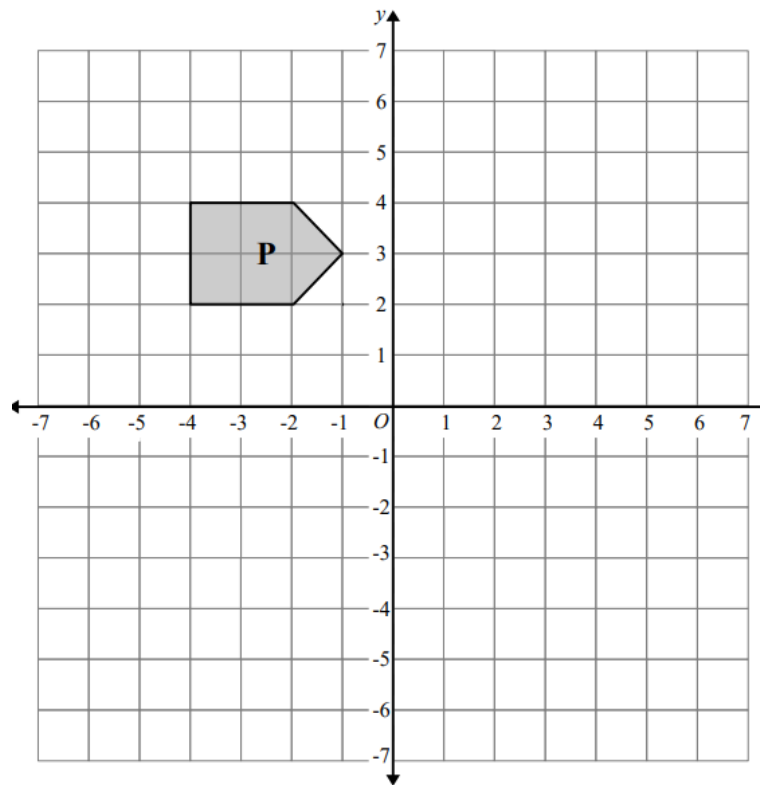


<p style="text-align: center;"><u>Term 1</u></p> <p>By the end of the term you should be able to complete this skills test</p>	<p>Write the HCF and LCM of 42 and 36 using prime factors</p>	<p>a. Convert <math>3.62 \times 10^{-4}</math> to an ordinary number</p> <p>b. Convert 206100000 to standard form</p>	<p>a. <math>(3.62 \times 10^7) + (5.01 \times 10^3)</math> give your answer in standard form</p> <p>b. <math>(3.62 \times 10^{-1}) \times (5.01 \times 10^{-3})</math> give your answer in standard form</p>
<p>a. <math>16^{\frac{1}{2}}</math></p> <p>b. <math>3^{-2}</math></p> <p>c. <math>125^{-\frac{2}{3}}</math></p> <p>d. <math>\left(\frac{64}{27}\right)^{\frac{4}{3}}</math></p>	<p>a. <math>\sqrt{54}</math></p> <p>b. <math>3\sqrt{48}</math></p> <p>c. <math>\sqrt{18} - \sqrt{8}</math></p> <p>d. <math>2\sqrt{75} + \sqrt{48}</math></p>	<p>a. <math>(5 - \sqrt{2})(1 + \sqrt{2})</math></p> <p>b. <math>(2 - \sqrt{45})(5 + \sqrt{45})</math></p> <p>c. <math>(5 + 3\sqrt{12})(2 + 4\sqrt{12})</math></p>	<p>a. <math>\frac{7}{\sqrt{3}}</math></p> <p>b. <math>\frac{3-3\sqrt{7}}{\sqrt{7}}</math></p>
<p>a. Expand <math>6s(3s - 5)</math></p> <p>b. Expand <math>2t^4(8t^5 + 6)</math></p> <p>c. Expand and simplify <math>5(5d + 6) - 4(4 - 3d)</math></p>	<p>a. Factorise <math>48u + 42</math></p> <p>b. Factorise <math>28t^3 + 16t</math></p> <p>c. Factorise <math>45d^{10} + 30d^7</math></p>	<p>If <math>a = \begin{pmatrix} 6 \\ 2 \end{pmatrix}</math>, <math>b = \begin{pmatrix} -2 \\ 0 \end{pmatrix}</math> and <math>c = \begin{pmatrix} -4 \\ -3 \end{pmatrix}</math></p> <p>a. <math>a + b</math></p> <p>b. <math>4b - c</math></p> <p>c. <math>3a + 4b - 2c</math></p>	<p>a. Find the nth term 2, 9, 16, 23</p> <p>b. Find the nth term 21, 15, 9, 3</p> <p>c. Is 18 in the sequence <math>4n - 1</math>?</p>
<p>Expand and simplify: <math>(x + 3)(x - 2)(x + 1)</math></p>	<p>a. Solve <math>x^2 + 5x - 36 = 0</math></p> <p>b. Solve <math>x^2 - x - 6 = 0</math></p> <p>c. Solve <math>x^2 - 10x + 24 = 0</math></p>	<p>Find the nth term 11, 20, 31, 44, 59</p>	<p>Turn over for transformations</p> 



Shape A is reflected in the x axis followed by a translation. What is the vector?

- Reflect shape P in the line  $x = 1$ . Label the new shape A.
- Translate shape P by the vector  $\begin{pmatrix} 5 \\ -6 \end{pmatrix}$ . Label the new shape B.
- Rotate shape P by  $90^\circ$  anticlockwise, centre O. Label the new shape C.



Describe the single transformation from B to A