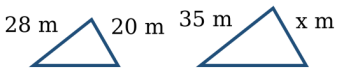
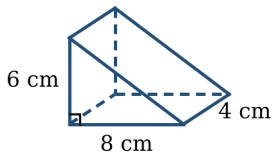
| Day 204 | A Tier 10-a-day |
|---|---|
| **1** The number of students in a school was 300 and is now 180.<br>Work out the percentage decrease. | |
| **2** Hugo, Jack and Dev share some money in the ratio 2 : 1 : 5.<br>Hugo gets £6.<br>How much does Dev get? | |
| **3** (a) Factorise $x^2 - 144$<br>(b) Use the same idea to work out $84^2 - 16^2$ without a calculator. | |
| **4** The two triangles are similar.<br>Work out the value of x.<br>The diagrams are not drawn accurately.<br> | |
| **5** Solve the simultaneous equations<br>$6x + 3y = 0$<br>$-x - 2y = -9$ | |

| Day 204 | A Tier 10-a-day |
|---|---|
| **6** For two events A and B:<br>P(A) = 0.6, P(B) = 0.6 and P(A or B) = 0.85.<br>(a) Work out P(A and B).<br>(b) Work out the probability that neither A nor B happens. | |
| **7** (a) Show that $0.\dot{6}\dot{8} = \frac{68}{99}$<br>(b) Hence write $5.\dot{6}\dot{8}$ as a mixed number in its simplest form. | |
| **8** Ship A sails 21 km from a port on a bearing of 270°.<br>Ship B sails 10 km from the same port on a bearing of 010°. (Calculator)<br>Work out the distance between the two ships.<br>Give your answer to 3 significant figures. | |
| **9** The diagram shows a triangular prism.<br>The cross-section is a right-angled triangle.<br>Work out the total surface area of the prism.<br>The diagram is not drawn accurately.<br><br> | |
| **10** Solve the simultaneous equations<br>$x^2 + y^2 = 25$<br>$y = -2x - 5$ | |