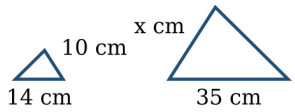
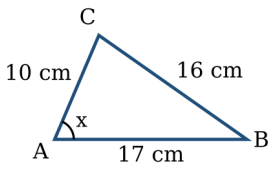
| Day 233 | A Tier 10-a-day |
|---|---|
| **1** A mechanic charges £45 plus £55 for each hour of work.<br>(a) Write a formula for the total cost, £C, after t hours.<br>(b) Leo pays £430 in total. Work out the number of hours. | |
| **2** Write 432 as a product of prime factors, in index form. | |
| **3** A triangle has sides of length 12 cm, 5 cm and 15 cm.<br>Is the triangle right-angled?<br>You must show your working. | |
| **4** Solve $2x^2 + 9x + 5 = 0$<br>Give your solutions correct to 2 decimal places.<br>(Calculator) | |
| **5** A cafe menu has 2 starters, 5 main courses and 3 desserts.<br>(a) How many different three-course meals are possible?<br>(b) A customer chooses a main course and either a starter or a dessert (not both). How many different meals are possible? | |

| Day 233 | A Tier 10-a-day |
|---|---|
| **6** The two triangles are similar.<br>Work out the value of x.<br>The diagrams are not drawn accurately.<br><br> | |
| **7** There are 34 students in a class.<br>14 students do drama and 21 students do choir.<br>9 students do neither.<br>(a) Work out how many students do both.<br>(b) One student is chosen at random. Find the probability that they do drama only. | |
| **8** $f(x) = \frac{x + 6}{4}$<br>(a) Find $f^{-1}(x)$<br>(b) Work out $f^{-1}(6)$ | |
| **9** Work out the size of angle x. (Calculator)<br>Give your answer to 1 decimal place.<br>The diagram is not drawn accurately.<br><br> | |
| **10** Maya invests £500 in a savings account. (Calculator)<br>The account pays compound interest at a fixed rate each year.<br>After 2 years there is £583.20 in the account.<br>Work out the annual rate of interest. | |