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| **National 5 Homework Exercise 17** | | | | | | | | | | C:\Users\Ian\Pictures\CHS.jpg | | |
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| **Trig Formulae** | | | | | | | | | |
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| Issued by: | | |  | | | | Return by: |  | | | | |
|  | | | | | | | | | | | | |
| **1.** | In each triangle below, find the missing value **accurate to 3 significant figures** | | | | | | | | | | | |
|  | | | | | | | | | | | | |
|  | a) | Find side BC. | | b) | Find angle QRP | | | | | | c) | Find side YZ |
|  | A  C  B  12cm  70°  28° | | | R  P  Q  45mm  35°  70mm | | | | | | | Y  X  Z  1.7m  52°  3.1m | |
|  | d) | Find side GH | | e) | Find side DF | | | | | | f) | Find angle STU |
|  | F  H  G  40cm  65°  49° | | | F  D  4m  62°  6m  E | | | | | | | U  T  S  15cm  17cm  23cm | |
|  |  | | |  | | | | | | |  | |
| **2.** | Find the areas of triangles XYZ and DEF above. | | | | | | | | | | | |
|  |  | | | | | | | | | | | |
| **3.** | C  D  B  A  70m  115m  95m  103m  125m | | | | | A surveyor has to find the area of a plot of land in the shape of an irregular quadrilateral. | | | | | | |
|  |  | | | | | | |
|  | After measuring the lengths of the sides and one diagonal, she makes the diagram below. | | | | | | |
|  |  | | | | | | |
|  | a) Find the size of angle ABC | | | | | | |
|  |  | | | | | | |
|  | b) Use your answer to find the area of triangle ABC | | | | | | |
|  |  | | | | | | |
|  | c) Find the total area of the plot of land. | | | | | | |
|  |  | | | | | | | | | | | |
| **4.** | A Jetski and a Speedboat leave a Harbour at the same time. | | | | | | | | N  N  N  252°  110°  35°  H  J  S | | | |
|  |  | | | | | | | |
|  | The Jetski travels on a bearing of 035° at an average speed of 45 km/hr. | | | | | | | |
|  |  | | | | | | | |
|  | The speedboat travels at an average speed of 70 km/hr. | | | | | | | |
|  |  | | | | | | | |
|  | After 12 minutes, the Speedboat is on a bearing of 110° from the Jetski, and the Harbour is on a bearing of 252° from the Speedboat. | | | | | | | |
|  |  | | | | | | | |
|  | Find the distance between Jetski and the Speedboat after 12 minutes, accurate to the nearest 100m. | | | | | | | |
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