The following questions are to be solved using the tangent ratio only.

1. ABC is a right-angled triangle with the angle at A = 90^o .
What is the length of the side AB, with the following values for the side AC and the angle at C ?(all distances in cm, answers to 2 d.p.)

(a) 8, 30^o (b) 14, 45^o (c) 28, 60^o

(d) 15, 51^o (e) 17, 39^o (f) 21, 66^o

(g) 10, 27^o (h) 28, 71^o (i) 39, 59^o

2. ABC is a right-angled triangle with the angle at B = 90^o .
What is the length of the side BC, with the following values for the side AB and the angle at C ?(all distances in cm, answers to 2 d.p.)

(a) 6, 59^o (b) 27, 21^o (c) 37, 27^o

(d) 48, 34^o (e) 11, 46^o (f) 22, 32^o

(g) 19, 66^o (h) 23, 71^o (i) 14, 27^o

3. Using the values for the two sides at right angles to each other in a right angled triangle, calculate the unknown interior angles.
(all distances in cm, answers to 1 d.p.)

(a) 9, 5 (b) 12, 8 (c) 23, 16

(d) 26, 19 (e) 42, 19 (f) 37, 20

(g) 29, 10 (h) 32, 21 (i) 49, 9

1.

(a) 4.62 (b) 14.00 (c) 48.50

(d) 18.52 (e) 13.77 (f) 47.17

(g) 5.10 (h) 81.32 (i) 64.91

2.

(a) 3.61 (b) 70.34 (c) 72.62

(d) 71.16 (e) 10.62 (f) 35.21

(g) 8.46 (h) 7.92 (i) 27.48

3.

(a) 60.9^o, 29.1^o (b) 56.3^o, 33.7^o (c) 55.2^o, 34.8^o

(d) 53.8^o, 36.2^o (e) 65.7^o, 24.3^o (f) 61.6^o, 28.4^o

(g) 71.0^o, 19.0^o (h) 56.7^o, 33.3^o (i) 79.6^o, 10.4^o