

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

1. ABC is a right-angled triangle with the angle at A = 90° .

What is the length of the side AB, with the following values for the hypotenuse BC and the angle at C ?(all distances in cm, answers to 2 d.p.)

- | | | |
|--------------------|--------------------|--------------------|
| (a) 5, 30° | (b) 12, 45° | (c) 18, 60° |
| (d) 21, 50° | (e) 19, 28° | (f) 13, 75° |
| (g) 9, 15° | (h) 37, 65° | (i) 41, 42° |

2. ABC is a right-angled triangle with the angle at B = 90° .

What is the length of the side AC, with the following values for the side BC and the angle at A ?(all distances in cm, answers to 2 d.p.)

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|--------------------|--------------------|--------------------|
| (a) 7, 35° | (b) 12, 48° | (c) 22, 52° |
| (d) 31, 71° | (e) 28, 63° | (f) 13, 44° |
| (g) 25, 42° | (h) 14, 19° | (i) 39, 81° |

3. Using the values for the hypotenuse and one side of a right angled triangle, calculate the unknown interior angles. (all distances in cm, answers to 1 d.p.)

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|------------|------------|------------|
| (a) 9, 5 | (b) 13, 8 | (c) 19, 17 |
| (d) 21, 13 | (e) 42, 25 | (f) 32, 19 |
| (g) 17, 11 | (h) 36, 21 | (i) 49, 41 |

1.

(a) 2.50

(b) 8.49

(c) 15.59

(d) 16.09

(e) 8.92

(f) 12.56

(g) 2.33

(h) 33.53

(i) 27.43

2.

(a) 12.20

(b) 16.15

(c) 27.92

(d) 32.79

(e) 31.43

(f) 18.71

(g) 37.36

(h) 43.00

(i) 39.49

3.

(a) 33.7° , 56.3° (b) 38.0° , 52.0° (c) 63.5° , 26.5° (d) 38.2° , 51.8° (e) 36.5° , 53.5° (f) 36.4° , 53.6° (g) 40.3° , 49.7° (h) 35.7° , 54.3° (i) 56.8° , 33.2°