

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

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

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

- | | | |
|--------------------|--------------------|--------------------|
| (a) 7, 30° | (b) 19, 45° | (c) 21, 60° |
| (d) 11, 52° | (e) 14, 38° | (f) 27, 65° |
| (g) 19, 25° | (h) 26, 75° | (i) 31, 52° |

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

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

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|--------------------|--------------------|--------------------|
| (a) 9, 55° | (b) 22, 28° | (c) 36, 22° |
| (d) 42, 33° | (e) 17, 49° | (f) 26, 31° |
| (g) 17, 68° | (h) 25, 70° | (i) 19, 24° |

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) 8, 7 | (b) 11, 7 | (c) 29, 19 |
| (d) 24, 15 | (e) 45, 29 | (f) 36, 29 |
| (g) 19, 12 | (h) 31, 28 | (i) 47, 30 |

1.

(a) 6.06

(b) 13.44

(c) 10.50

(d) 6.77

(e) 11.03

(f) 11.41

(g) 17.22

(h) 6.73

(i) 19.09

2.

(a) 15.69

(b) 24.92

(c) 38.83

(d) 50.08

(e) 25.91

(f) 30.33

(g) 45.38

(h) 73.10

(i) 20.80

3.

(a) 29.0° , 61.0° (b) 50.5° , 39.5° (c) 49.1° , 40.9° (d) 51.3° , 38.7° (e) 49.9° , 40.1° (f) 36.3° , 53.7° (g) 50.8° , 39.2° (h) 25.4° , 64.6° (i) 50.3° , 39.7°