WORKSHEET

The sine rule – Finding lengths of sides

Use the sine rule to find the length of the missing side in each triangle. Give your answers to one decimal place.

1

u

92°

9 cm

47°

2

7 cm

x

65°   60°

3

31°

m

76°

4 cm

4

52°

12 cm

67°

b

5

y

19 cm

46°   72°

6

44°

h

57°

3 cm

7

19°

22 cm

x

35°

8

86° w

51° 13 cm

9

8.3 cm

55°

n

51°

10

105°

48°

10 cm

t

11

52° 5.7 cm

67° a

12

b

8.7 cm

28° 99°

13

k

83° 72°

4 cm

14

9.3 cm 48°

55° p

15

29.8 cm
47°
88°
q

16

51.7 cm
59°
83°
g

17

13.5 cm
x
100° 45°

18

15°
29.2 cm
z
87°

19

7.3 cm
42°
96°
x

20

38°
83.6 cm
27° a

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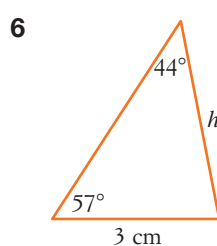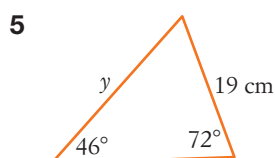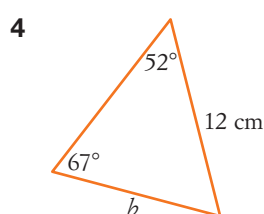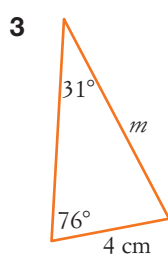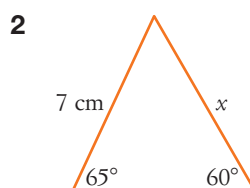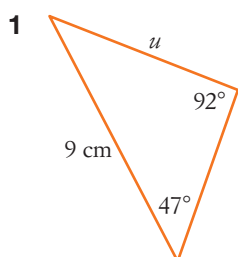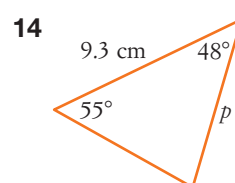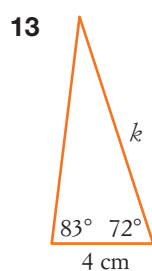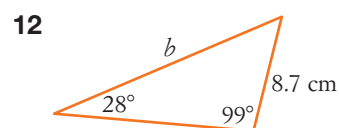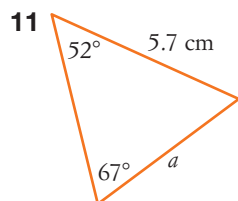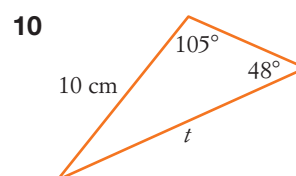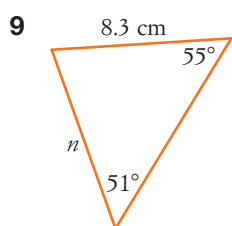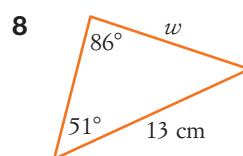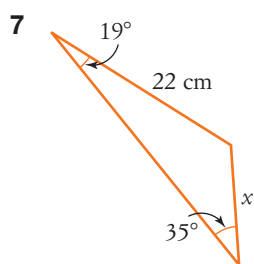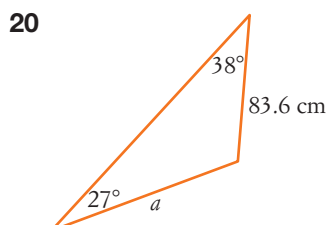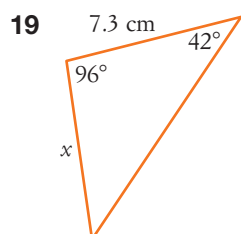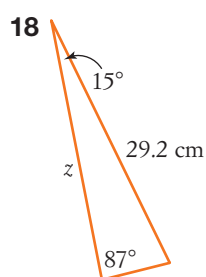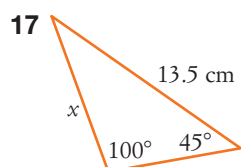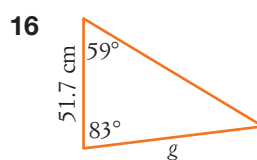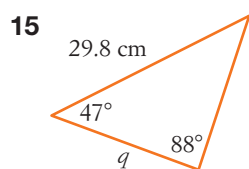
21 In $\triangle DEF$, $\angle D = 65°$, $\angle F = 57°$ and $f = 42$ mm.

   i Draw a sketch of $\triangle DEF$, showing all the information given.

   ii Find d, giving your answer to one decimal place.

22 In $\triangle ABC$, $c = 8.3$cm, $\angle B = 95°$ and $\angle C = 33°$

   i Draw a sketch of $\triangle ABC$, showing all the information given.

   ii Find b, giving your answer to one decimal place.

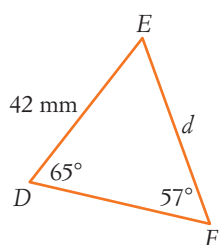**23** In $\triangle MNP$, $\angle M = 18°$, $\angle P = 24°$ and $m = 17.3$ cm.

   i Draw a sketch of $\triangle MNP$, showing all the information given.

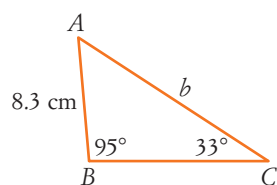   **ii** Find p, giving your answer to one decimal place.

Answers

1 6.6 cm
2 7.3 cm
3 7.5 cm
4 10.3 cm
5 25.1 cm
6 3.6 cm
7 12.5 cm
8 10.1 cm
9 8.7 cm
10 13.0 cm
11 4.9 cm
12 18.3 cm
13 9.4 cm
14 7.8 cm
15 21.1 cm
16 72.0 cm
17 9.7 cm
18 28.6 cm
19 7.3 cm
20 113.4 cm

21 i

ii 45.4 mm

22 i

ii 15.2 cm

23 i

ii 22.8 cm