FOUNDATION & HIGHER

SAME AT BOTH TIERS

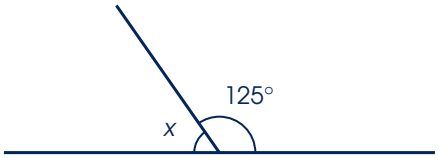
Name ..... Class .....

G3: Angle facts

Angles at a point, on a line, vertically opposite, in parallel lines and in polygons

20 marks · 25 minutes · Non-calculator

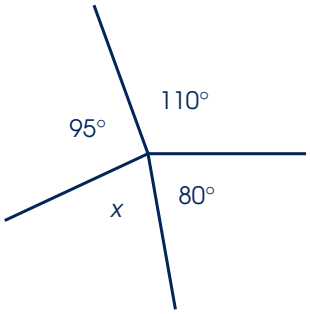
1) Find the size of angle x.



..... °

[Question 1: 1 marks]

2) Find the size of angle x.

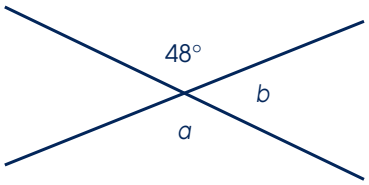


.....°

[Question 2: 1 marks]

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3) Two straight lines cross.



(a) Find angle a.

.....°

(1)

(b) Find angle b.

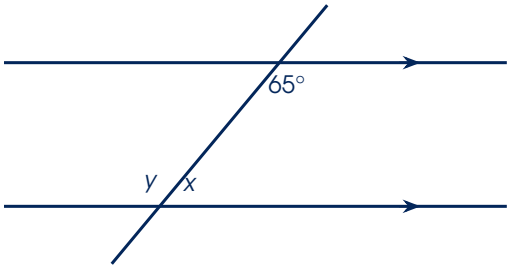
.....°

(1)

[Question 3: 2 marks]

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4) The diagram shows two parallel lines crossed by a straight line.



(a) Find angle x.

..... °

(1)

(b) Give a reason for your answer to (a).

.....

(1)

(c) Find angle y.

..... °

(1)

(d) Give a reason for your answer to (c).

.....

(1)

[Question 4: 4 marks]

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5) Two angles of a triangle are 52° and 71°. Find the third angle.

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[Question 5: 1 marks]

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6) An isosceles triangle has one angle of 40° between its two equal sides. Find the size of each of the other two angles.

..... °

[Question 6: 2 marks]

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7) (a) Find the sum of the interior angles of a hexagon.

..... °

(1)

(b) Find the size of each interior angle of a regular octagon.

..... °

(2)

[Question 7: 3 marks]

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8) Each exterior angle of a regular polygon is 24°. How many sides does the polygon have?

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[Question 8: 2 marks]

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9) Four angles of a pentagon are 100°, 110°, 95° and 120°. Find the fifth angle.

..... °

[Question 9: 2 marks]

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10) An exterior angle of a triangle is 130°. One of the two interior angles opposite it is 60°. Find the other.

..... °

[Question 10: 2 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	55	B1.
2	75	B1.
3	(a) 48 (b) 132	B1 each.
4	(a) 65 (b) alternate angles (c) 115 (d) co-interior angles add to 180°	B1 each. (Accept y via angles on a straight line with x.)
5	57	B1.
6	70 and 70	$180 - 40 = 140$ (M1); A1.
7	(a) 720 (b) 135	(a) B1. (b) $1080 \div 8$ or $180 - 45$ (M1); A1.
8	15	$360 \div 24$ (M1); A1.
9	115	Sum 540 (M1); A1.
10	70	$130 - 60$ (M1); A1.