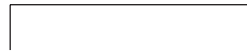


13 Number patterns



For questions 1 to 4:

- a Find the rule to produce the nth term.
- b Find the 12th term.
- c Find the 27th term.

1 7, 10, 13, 16, 19

1a

1b.....

1c.....

2 5, 9, 13, 17, 21

2a

2b.....

2c.....

3 1, 8, 15, 22, 29

3a

3b.....

3c.....

4 10, 6, 2, -2, -6

4a

4b.....

4c.....

5 Here is a pattern made out of matchsticks:



a Draw the next pattern.

5a

b What is the rule to find the number of matchsticks in the nth term?

5b.....

c Use your rule to find the number of matchsticks in the 20th term.

5c.....

d Which term has 121 matchsticks?

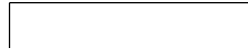
5d



Minimum mark	13	11	8	5	
Circle grade	A	B	C	D	E

16

14 Rules: Equations



Solve the following equations:

1 $x + 3 = 10$

2 $x + 7 = 5$

1.....

3 $x - 2 = 7$

4 $x - 8 = 4$

2.....

3.....

5 $6y = 30$

6 $3a = 18$

4.....

5.....

6.....

7 $-4c = 20$

8 $\frac{d}{4} = 8$

7.....

8.....

9 $\frac{y}{3} = 6$

10 $-3a = -18$

9.....

10.....

11 $6a - 3 = 21$

12 $8a + 4 = 3a + 19$

11.....

12.....

13 $2a + 10 = 5a + 1$

14 $\frac{x}{6} - 1 = 17$

13.....

14.....

15 $\frac{x}{5} + 2 = 12$

16 $\frac{4x}{3} = 8$

15.....

16.....



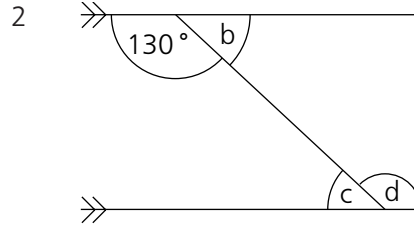
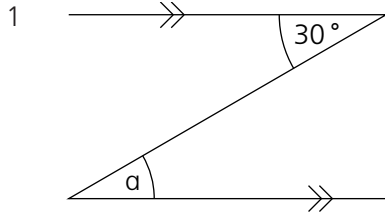
Minimum mark	13	11	8	5	
Circle grade	A	B	C	D	E

_____ 16

19 Intersecting and parallel lines



Find the missing angles in these diagrams:

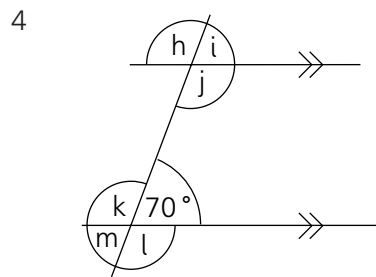
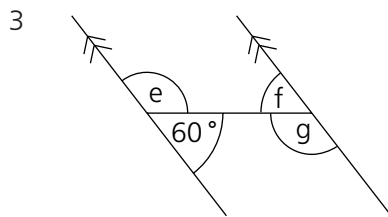


1a

2b.....

2c.....

2d



3e.....

3f.....

3g

4h.....

4i.....

4j.....

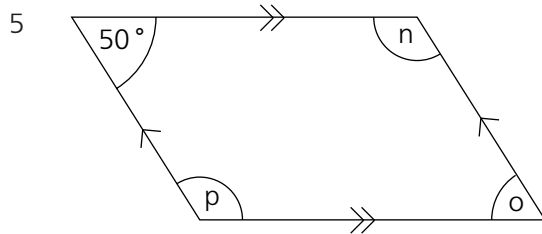
4k.....

4l.....

4m.....

5n.....

5o.....



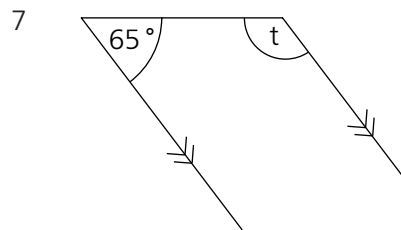
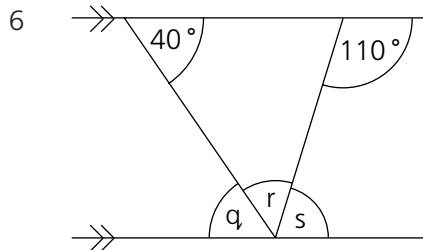
5p.....

6q

6r

6s.....

7t.....



Minimum mark	16	13	10	7	
Circle grade	A	B	C	D	E

20

