S2 Prior – Test 2 Revision

1. Patterns and Relationships

1. Write down the first four terms of the sequence whose n^{th} term is given by the expression:
   (a) $3n + 4$ (b) $7n - 5$

2. (i) Copy and complete the table for each equation below.
   (ii) Draw the graph of each equation on a coordinate diagram.

(a) $y = 3x + 1$

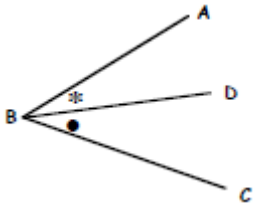
x	0	1	2
y			

(b) $y = 2x - 3$

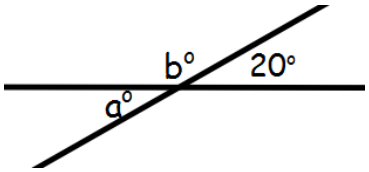
x	2	3	5
y			

2. Angles

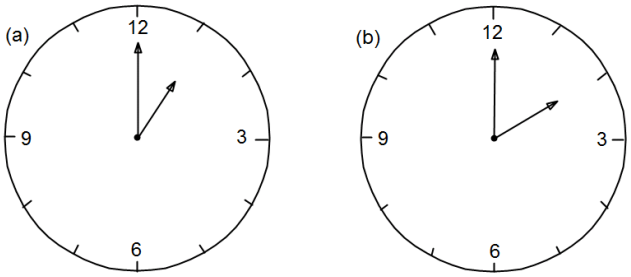
1. Write down the **name** of the angle marked • in this diagram.



2. Find the sizes of the angles marked a and b in this diagram.



3. **Calculate** the size of the
   (a) acute angle between the hands of a clock at 1 o'clock
   (b) **reflex** angle between the hands of a clock at 2 o'clock.



3. Equations

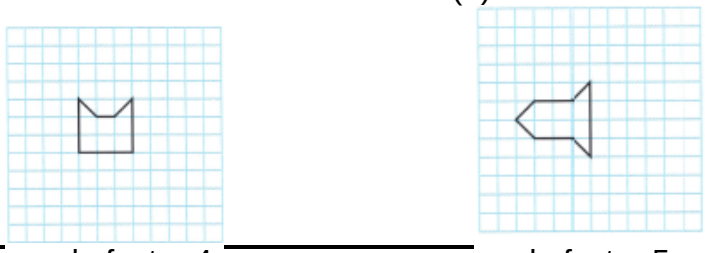
Solve these equations: 1. $4y + 2 = 30$ 2. $2x - 3 = 19$

3. $\frac{a}{2} + 1 = 5$ 4. $3c + 4 = -5$

4. Similarity

1. Draw an enlargement of each shape using the given scale factor:

(a) (b)



scale factor 4 scale factor 5

5. Ratio

1. There are 15 boys and 25 girls in the junior section of a tennis club.
   Write down the ratio of boys to girls in simplest form.

2. There are 32 silver cars and 24 red cars in a car park.
   Write down the ratio of silver cars to red cars in simplest form.

3. Adam makes concrete by mixing cement and sand in the ratio 1:3.
   He has 12 bags of sand. How many bags of cement does he need?

4. Green paint is produced by mixing yellow and blue paint in the ratio 4:1.
   How many tins of blue should be mixed with 5 tins of blue?

ANSWERS

1. Patterns and Relationships

1. (a) 7,10,13,16 (b) 2,9,16,23

2. (i) (a)

x	0	1	2
y	1	4	7

(b)

x	2	3	4
y	1	3	5

(ii) Ask your teacher to check your graphs.

2. Angles

1. CBD or DBC 2. $a = 20^o$ $b = 160^o$ 3. (a) 30^o (b) 300^o

3. Equations

1. $y = 7$ 2. $x = 11$ 3. $a = 8$ 4. $b = -3$

4. Similarity

Ask your teacher to check your drawings.

5. Ratio

1. 3:5 2. 4:3 3. 4 4. 20