Westbourne House School
Revision – Summer Term

Y7 Extension (set 1) MATHS REVISION CHECKLIST

The Exam(s) will consist of:

One Non-calculator Paper – duration 60 minutes
(in addition to the Y7 Maths exams)

Equipment you will need for the exam:

- Ruler (15cm and 30cm)
- Pencil
- Eraser and pencil sharpener

TOPIC / PAPER	WHAT TO REVISE	DONE?
	Firstly, you should revise all the topics that the rest of year 7 are revising and make sure you are really secure on these. Then, work through the sample questions below – they are similar topics but the questions should be more testing. The extension topics for this paper are: • Solving simultaneous equations • Using and applying Pythagoras theorem	

NOTES/TIPS:
• Revise by practising the questions below, using your note books and appropriate websites like www.mymaths.co.uk • The Collins KS3 Maths (Standard): All-in-One Revision and Practice (Collins KS3 Revision and Practice - New 2014 Curriculum Edition) ISBN 9780007562770 provides good revision notes and revision for topics above CE. • I cannot stress enough the need for clear and logical workings. • For any further information or guidance about revision or the actual exam, please contact the Head of Maths – Mrs Lucy Low (llow@westbournehouse.org)

Practice Questions

Fractions

1. Find the value of the following

(Hint: except for adding convert to improper fractions first and remember BIDMAS still applies)

$$2\frac{3}{4}+4\frac{2}{3}$$

$$9\frac{1}{5}-\frac{7}{9}\times 1\frac{5}{7}$$

$$\frac{7}{9}\times 1\frac{1}{2}$$

Fractions / Decimals / %

2. Place the following in order of size starting with the smallest
(Hint: use decimal multiplication to work out %s or decimals and show ALL your workings)

$$\frac{2}{5}$$ of 60   26% of 50   26 ÷ 0.5   25% of 60

Number work

3. If we know that 68 x 96 = 6528, find the value of the following ......

680 x 9.6 =

6.8 x 9.6 =

34 x 192 =

3.4 x 1.92 =

65.28 ÷ 6.8 =

$$6\frac{4}{5}\times 9\frac{3}{5}=$$

(Remember: you are NOT supposed to be working these calculations out long hand, you are supposed to be able to use the information in the question)

Percentages

4. A man outs £120 in the bank and earns 5% interest a year.

a. How much does he have at the end of the first year?

b. How much does he have at the end of 2 years?

c. Leaving your answer in index form how much does he have after 5 years?

5. A coat costs £42.50 at a 15% discount in a sale. How much did it cost originally?

6. If I buy a jacket for £85 and sell it for £78. What is my percentage loss?

Algebra

7. Simplify the following expressions

$3a + 2b + 2a - b$

$5a - 4b - a + b$

$3a \times 3a$

$5a^2 \times 4ab$

$30 + 4(x + 3)$

$45 - 3(2x + 5)$

$60 - 3(3x - 7)$

$(3a^2)^3$

$(3x + 4)(2x - 5)$

$(2x + 5)(3x + 4)$

8. Factorise the following expressions

$3x + 6$

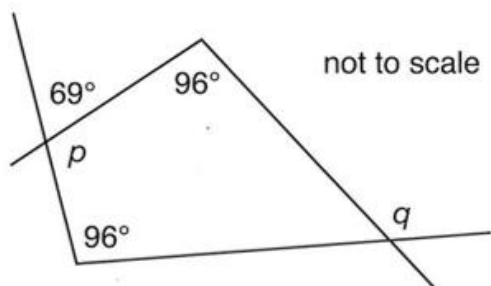$3ab + 6b$

$4a^2b + 6a + 8ab$

9. Solve the following equations

$3x + 5 = 8x - 1$

$4x - 11 = 7 - 2x$

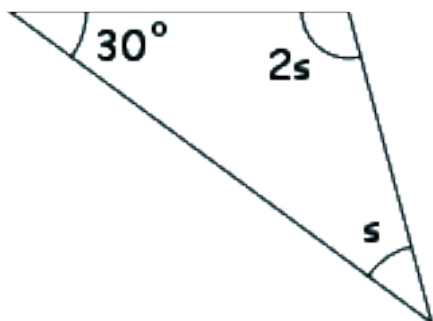$3(2x + 4) = 17 + 2(x - 5)$

Angle work

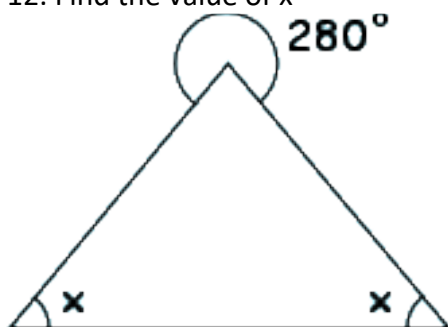10. Find the size of each of the angles p and q

69°   96°   not to scale
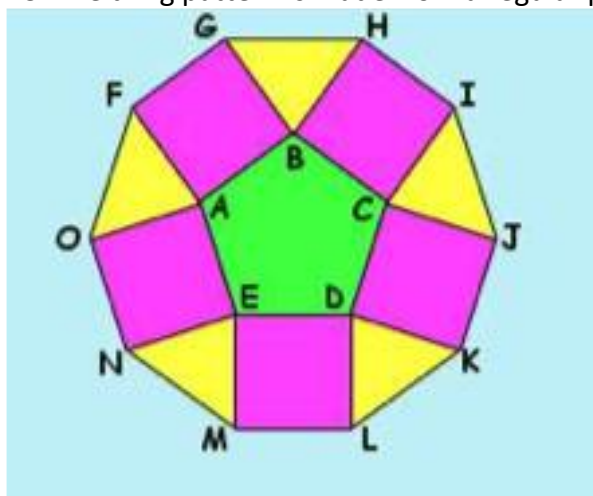
p

96°   q

11. Find the value of s

30°
2s

s

12. Find the value of x

280°

x   x

13. The tiling pattern is made from a regular pentagon, five squares and five triangles.

Find the following angles (the obtuse or acute angle not the reflex angle)

    a. angle CDE
    b. angle DLK
    c. angle BGH
    d. angle FAE

Average speed

Hint: ALWAYS find the TOTAL DISTANCE and TOTAL TIME in order to work out average speed.
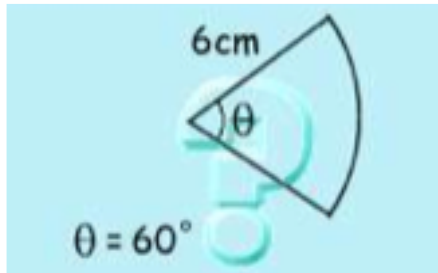
14. I travel 8km at 6km/hour and 10 km at 5km/hour. What is his average speed?

15. I travel at 5km/hour for 10 mins and 10 km/hour for 15 mins. What is my average speed?

Area and volume

16. Find the area and perimeter of the following.

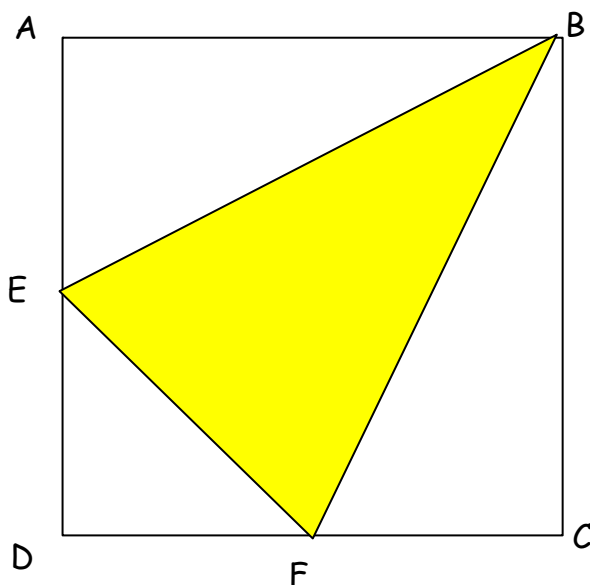a.

6cm

θ

θ = 60°

b.

3cm 3cm 3cm

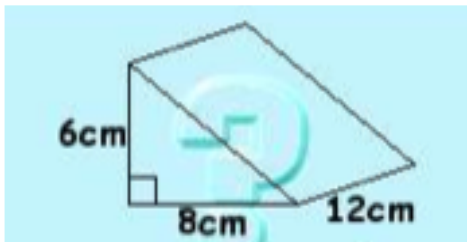17. What fraction of the area of the square is shaded ?

AE is half the length of AD and
DF is half the length of DC

A

B

E

D

F

C

18. Find the volume and surface area of the of the following

a.

6cm

8cm   12cm

b.

6mm

7mm

19. Find the volume of the following

1·8m

2·6m