EMG Education

# Grade 6 - Maths

# Student Review Pack

| Week | Topic | Lesson | Resources |
|---|---|---|---|
| Week 13 | Algebra | Introduction | KS3 One page 56-60 |
| Week 14 | Algebra | Substitution & Formulae | KS3 One page 61-64 |
| Week 17 | Algebra | Sequences | KS3 One page 235 |
| Week 18 | Geometry | Angles & Triangles | KS3 One page 110-111 |
| Week 19 | Geometry | Quadrilaterals | KS3 One page 113-114 |
| Week 20 | Geometry | 3D Shapes | - |

*if KS3 One Maths Textbook is not available, use notes and booklets provided in class.



## Algebra

1. Match each term to its correct definition:

| | |
|---|---|
| constant | a group of terms and operators |
| equation | part of an expression separated by operators (like ×÷+-) |
| coefficient | a number alone |
| variable | a number used to multiply the variable |
| term | has an equal sign to show that both sides are balanced |
| expression | a letter that represents a number |

2. Simplify by collecting like terms:

a) $6x + 5 + 12x - 6$ _____

b) $2x^2 - 4 + 9x^2 + 9$ _____

c) $y + y + y + y + y$ _____

d) $5x - 8 + 7x - 2x^2 - 4 + 9x^2 + 4x^3$ _____

e) $5a + 8 - 7a$ _____

f) $5ab + 8 + 6ba - a + 3b$ _____

g) $y \times y \times y$ _____

*KS3 Maths Progress One Unit 3.3 STEM: Using formulae*
*Answer page 62 Q11 and 12*

**11** **STEM** To convert from °C ($C$) to Kelvin ($K$) scientists use the formula $K = C + 273$.
Convert these temperatures to Kelvin.
**a** 100°C **b** –20°C **c** 0°C **d** –100°C

**12** **STEM** The formula for converting from temperature in Fahrenheit ($F$) to Celsius ($C$) is $C = \frac{5(F - 32)}{9}$.
Convert these temperatures into °C.
**a** 41°F **b** 59°F **c** 77°F **d** 23°F

11.
a)
b)
c)
d)

12.
a)
b)
c)
d)

## Algebra - Sequences

**Write the next 3 terms:**
4, 9, 14, 19, ___,___,___
28, 22, 16, 10, ___,___,___

**What is the rule to find the next term?**
4, 6, 8, 10, 12
Rule:_____

22, 18, 14, 10, 6
Rule:_____

9, 12, 15, 18, 21
Rule:_____

**What is the rule to find the *n*th term?**
4, 6, 8, 10, 12
Rule:_____

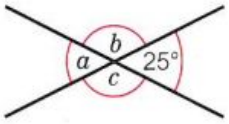
22, 18, 14, 10, 6
Rule:_____

9, 12, 15, 18, 21
Rule:_____

# Geometry - Angles & Triangles

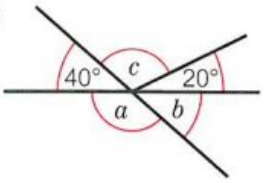
*KS3 Maths Progress One Unit 5.1 Angles and parallel lines*
*Answer page 108 Q4 and 5*

**4 Reasoning** Work out the angles marked with letters.
Give your reasons.

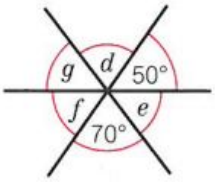



**5 Reasoning** Work out the angles marked with letters.
Give reasons for your answers.

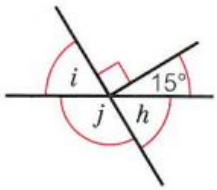
**a**




**b**

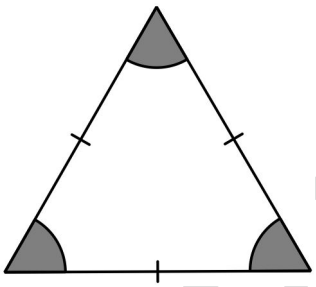



**c**



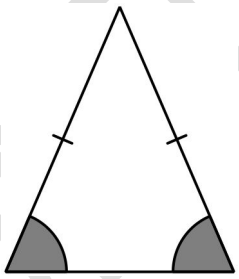

Name these four triangles and write a sentence about each:

Name:



Describe:

Name:



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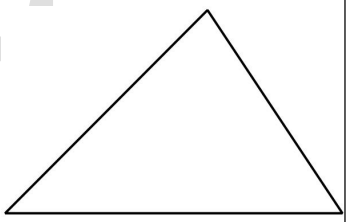

Describe:

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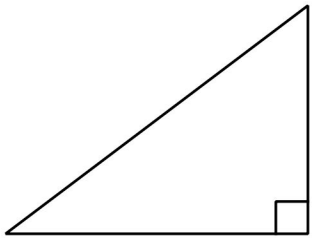
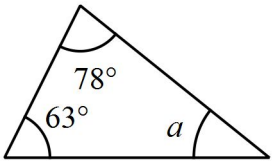
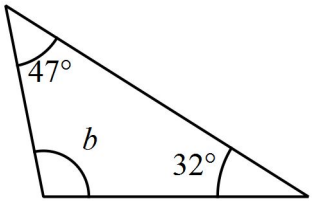
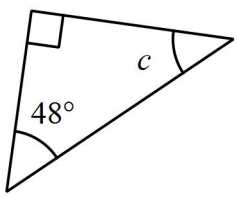


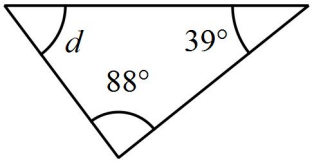
Describe:

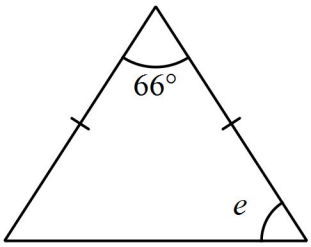
Calculate the missing angles in the below triangles:

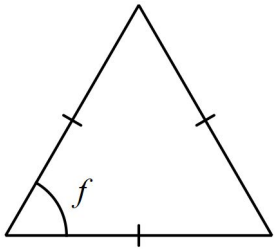


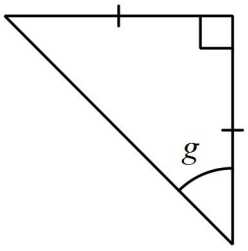



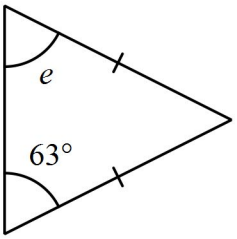



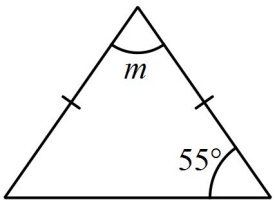



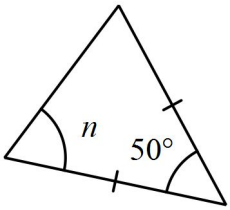


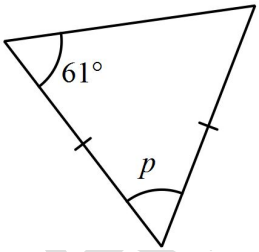



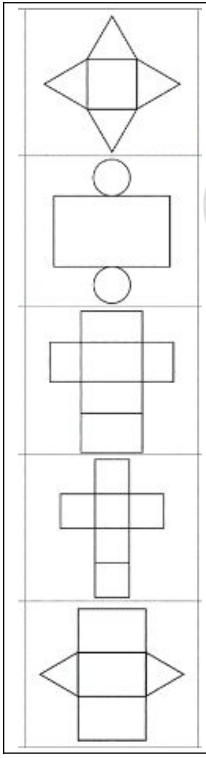

a)
b)
c)
d)
e)

f)
g)
e)
m)
n)
p)



## Geometry - 3D Shapes

A net is a 2D pattern that you can fold into a model of a solid 3D shape.
Look at the following nets; name the 3D shapes and count the number of faces, edges and vertices.

| | Name of 3D Shape | Faces | Edges | Vertices |
|---|---|---|---|---|
|  | | | | |
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