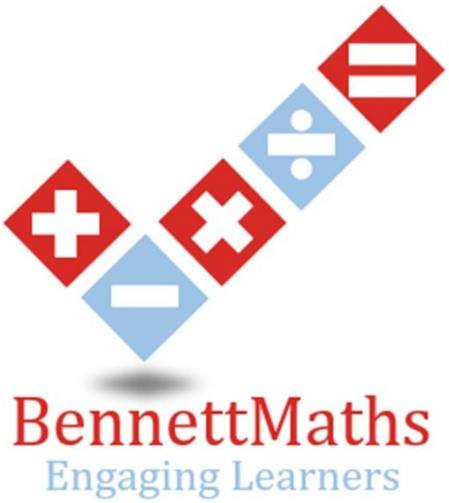
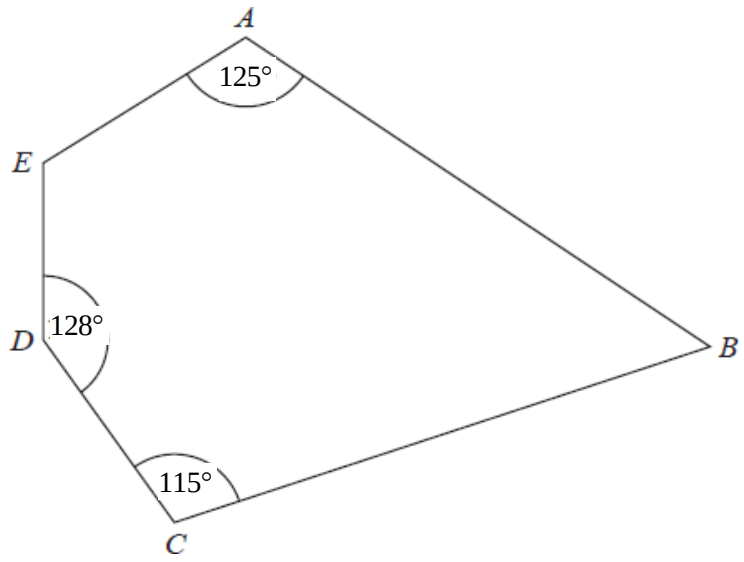


Name: _____

BennettMaths Edexcel 1H – Part 2

10 Here is a pentagon.



Angle *AED* = 3 × angle *ABC*

Work out the size of angle *AED*.
You must show all your working.

..... °

(Total for Question 10 is 4 marks)

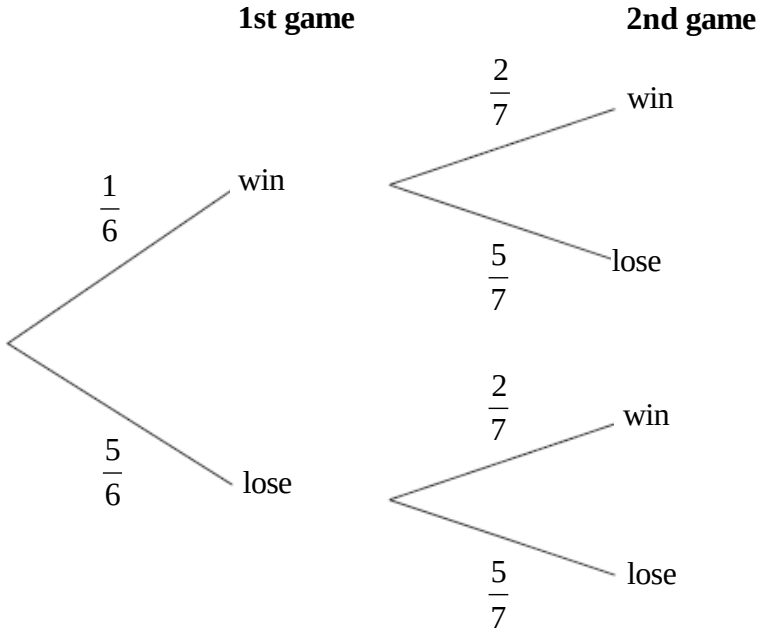
11 Write $\dfrac{(10x^6y^4)^2}{4x^2y^5 \times 5xy^{-4}}$ in the form ax^by^c where a, b and c are integers.

.....

(Total for Question 11 is 3 marks)

12 Malcolm plays two games of tennis.

The probability tree diagram shows the probabilities that Malcolm will win or lose each game.



Find the probability that Malcolm will win at least one game.

.....

(Total for Question 12 is 3 marks)

13 y is directly proportional to x.

$y = 36$ when $x = 1.2$

Work out the value of y when $x = 4$

$y =$ .....

(Total for Question 13 is 3 marks)

---

14 (a) Write $\frac{1}{81}$ in the form 3^n where n is an integer.

.....

(1)

(b) Work out the value of $27^{\frac{4}{3}} - 16^{\frac{3}{2}}$

.....

(3)

(Total for Question 14 is 4 marks)

---

15 The equation of line $\mathbf{L}_1$ is $y = 3x - 5$
The equation of line $\mathbf{L}_2$ is $4y + kx - 20 = 0$

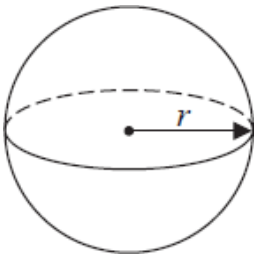
$\mathbf{L}_1$ is perpendicular to $\mathbf{L}_2$

Find the value of k.
You must show all your working.

k = ...

(Total for Question 15 is 3 marks)

16 Here is a sphere.



Surface area of sphere = $4\pi r^2$

$\frac{5}{8}$ of the surface area of this sphere is 375π cm^2

Find the diameter of the sphere.
Give your answer in the form $a\sqrt{b}$ where both a and b are integers.

..... cm

(Total for Question 16 is 4 marks)

17 Make x the subject of the formula $y = \dfrac{5(3x - 2)}{7x + 4}$

.....

(Total for Question 17 is 4 marks)