Lighthouse 7 (Checkpoint 1)

1. Complete this times table grid

X	$-8a^2$	6bc	5cd
5ed			
-9fa			
7ad			

LL video

2. Simplify $35a^3b^2 \div 5b^5cd$

LL video

3. What is the upper bound of 0.0045 if it has been rounded to 2 s.f ?

YT video

4. Write as a normal number

a) $(3.1 \times 10^4) \times (4 \times 10^5)$ LL video

b) $(2.0 \times 10^7) \div (5 \times 10^5)$ LL video

5. I invest £300 at 10% compound interest for two years. Calculate the total in the account at the end of the two years.

CM236

6. What is the value of a if the area of the rectangle is $75cm^2$?

LL video

7. A regular polygon's interior angles sum to 540 degrees. Two are drawn so there is a common vertex. What angle is left around the vertex?

LL video

8. Q(5, 17) and R(-1, -1) are the ends of a line segment

   a) Find the midpoint of QR LL video

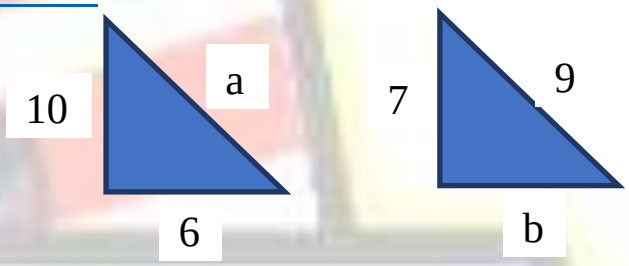
   b) Find the gradient of QR

LL video

9. Solve $x + 2y = 19$

   $y = 2x - 13$

LL video



10. . Find the missing side lengths leave your answer as a surd (e.g. $\sqrt{51}$)

LL video 1(a) LL video 2(b)

11. There are 5 reds and 3 green counters in a bag. I take one counter, **do not replace it**, and then take another. What is the probability the two counters are the same colour?

YT video

12. Factorise a) $2a^2 + 3a - 2$ b) $4a^2 - 9$

CM 119 CM120