**11 Maths Methods – Circular Functions (Work Plan) 2020**

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| **Skill** | **Practice** | **Resources** | **Learning Focus** | **Success Criteria** |
| Angles in degrees and radianDefine : Sine, Cosine, TangentSymmetry properties | **Ex 14A Page 486** 1-7 parts a, c, e**Ex 14B Page 488**1-3 parts a, c, e**Ex 14C Page 489**1 a c e, 2a c e**Ex 14E Page 492** 1 a b f, 2, 3 a b e, 5, 6 a c e g h | <https://www.youtube.com/watch?v=wcfkDuFpbiM><https://www.youtube.com/watch?v=IREakTy50J4><https://www.youtube.com/watch?v=25NuDwXAja0><https://www.youtube.com/watch?v=I-36SsQ9KgQ><https://www.youtube.com/watch?v=Ribl5-_C0OQ><https://www.youtube.com/watch?v=aRHRueLVkLE> | Understand the Radian measure of anglesKnow the relationship between Degrees and RadianBe able to convert from Degrees to Radian and vice versaUnderstand how sine, cosine are defined in relation to the unit circle Understand the quadrants of the Cartesian plane in relation to the unit circleKnow the symmetry properties of both positive and negative angles in the quadrantsKnow the relationship between angles in the first quadrant (reference angle) and the other quadrantsBe able to use the reference angle to find trigonometric values in all quadrants | Correctly convert from Degrees to Radian and vice versaCorrectly find sine, cosine valuesCorrectly use the reference angle to find trigonometric values in all quadrants |
| Exact Values | **Ex 14F Page 495** All Questions | <https://www.youtube.com/watch?v=qTbDQ9gkKJg> | Understand what an exact valuesKnow that for some angles there are exact values for the trigonometric valuesBe able to use exact values | Correctly use exact values |
| Trig Equations | **Ex 14H Page 507** 1 a c, 2 a b d f, 3 a c e, 4 a c, 5 a b, 7 a b d | <https://www.youtube.com/watch?v=IWeuFrtwXkY> | Be able to solve equations of the form $ b=a\sin(\left(n x\right))$ and $b=a\cos(\left(n x\right))$ over a given domainKnow how to solve by hand and using the calculator | Correctly solve equations of the form $ b=a\sin(\left(n x\right))$ and $b=a\cos(\left(n x\right))$ Give the correct number of solutions for the given domainCorrectly use the calculatorGive the solution in the correct units - degree or radian |

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| Graphs of Sin, Cos | **Ex 14G Page 502**1 – 3 parts a c e, 4, 5 a c, 7 a c e | <https://www.youtube.com/watch?v=u4RcBdMNyCQ><https://www.youtube.com/watch?v=OjHgoZOdRKM> | Recognise the graphs of $y=\sin(x)$ and $y= \cos(x)$Know the features of sin and cos graphsBe able to determine the features of sin and cos graphsBe able to determine the transformations for graphs of the form $y=a\sin(\left(n x\right))$ and $y=a\cos(\left(n x\right))$ | Correctly determine the features of sin and cos graphsCorrectly sketch sin and cos graphs |
| Transformations | **Ex 14I Page 509** 1 a e f, 2, 4, 5 a c**Ex 14J Page 512**1 a c, 2 a b | <https://www.youtube.com/watch?v=ijTIr-aykUk><https://www.youtube.com/watch?v=CuvO9-Zk2Xc><https://www.youtube.com/watch?v=80c_F0-7ZxE><https://www.youtube.com/watch?v=BQ4QzTcG90g> | Be able to determine the transformations for graphs of the form $y=a\sin(\left(n x \pm ε\right) \pm b)$ and $y=a\cos(\left(n x \pm ε\right) \pm b)$Be able to sketch the graphs of the form $y=a\sin(\left(n x \pm ε\right)\pm b)$ and $y=a\cos(\left(n x \pm ε\right)\pm b)$ | Correctly sketch the graphs of the form $y=a\sin(\left(n x \pm ε\right)\pm b)$ and $y=a\cos(\left(n x \pm ε\right)\pm b)$Over a suitable or specified domain |
| Revision | **Page 529 🡪****TF -** Q1-6 every 2nd part**MC** – Q2-6 |  |  |  |