N5 Maths: Trigonometric Equations

Q1 Non-calculator. List the other three related angles in the range $0°$ to $360°$.

a) $40°$ **b)** $70°$ **c)** $25°$

d) $100°$ **e)** $150°$ **f)** $225°$

g) $260°$ **h)** $310°$ **i)** $355°$

Q2 Non-calculator. Given that $sin\ 30° = \frac{1}{2}$, write down the values of

a) $sin\ 150°$ **b)** $sin\ 210°$ **c)** $sin\ 330°$

Q3 Non-calculator. Given that $cos\ 45° = \frac{1}{\sqrt{2}}$, write down the values of

a) $cos\ 135°$ **b)** $cos\ 225°$ **c)** $cos\ 315°$

Q4 Non-calculator. Given that $tan\ 60° = \sqrt{3}$, write down the values of

a) $tan\ 120°$ **b)** $tan\ 240°$ **c)** $tan\ 300°$

Q5 Non-calculator. List each of the following values in order, from smallest to largest:

a) $sin\ 100°,\ sin\ 90°,\ sin\ 270°,\ sin\ 335°$

b) $cos\ 0°,\ cos\ 180°,\ cos\ 350°,\ cos\ 236°$

c) $tan\ 65°,\ tan\ 180°,\ tan\ 295°$

Q6 Calculator. Solve each equation for $0° \leq x \leq 360°$, correct to 1 decimal place.

a) $sin\ x° = 0.3$ **b)** $cos\ x° = -0.7$ **c)** $tan\ x° = \frac{2}{5}$

d) $sin\ x° = -\frac{3}{8}$ **e)** $cos\ x° = 0.56$ **f)** $tan\ x° = -2$

g) $sin\ x° = 0.745$ **h)** $cos\ x° = -0.92$ **i)** $tan\ x° = -\frac{1}{6}$

Q7 Calculator. Solve each equation for $0° \leq x \leq 360°$, correct to 1 decimal place.

a) $5\ sin\ x° = 1$ **b)** $3\ cos\ x° = -2$ **c)** $5\ tan\ x° = 3$

d) $4\ sin\ x° + 1 = 2$ **e)** $7\ cos\ x° - 2 = 1$ **f)** $1 + 4\ tan\ x° = -6$

g) $3 - 5\ sin\ x° = 1$ **h)** $2 = 5 + 4\ cos\ x°$ **i)** $\frac{1}{2}\ tan\ x° = 3$

j) $4 + 3\ sin\ x° = 2$ **k)** $6\ cos\ x° + 1 = 3$ **l)** $1 + 3\ tan\ x° = -7$

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