

WKF F3 Ch9 Trigonometric Relations Consolidated Assignment 4

Grade 9 Mathematics Term 1 Consolidated Assignment 4

Name: _____ (_____)

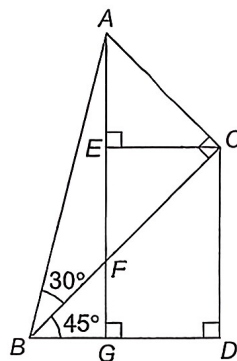
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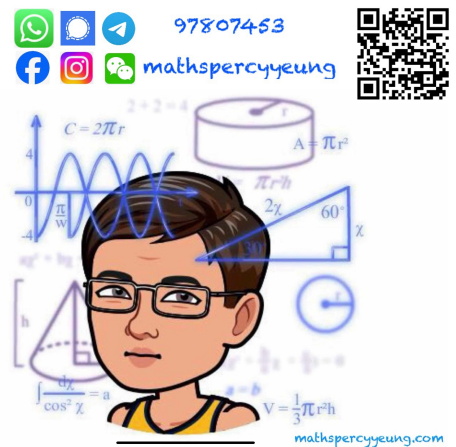
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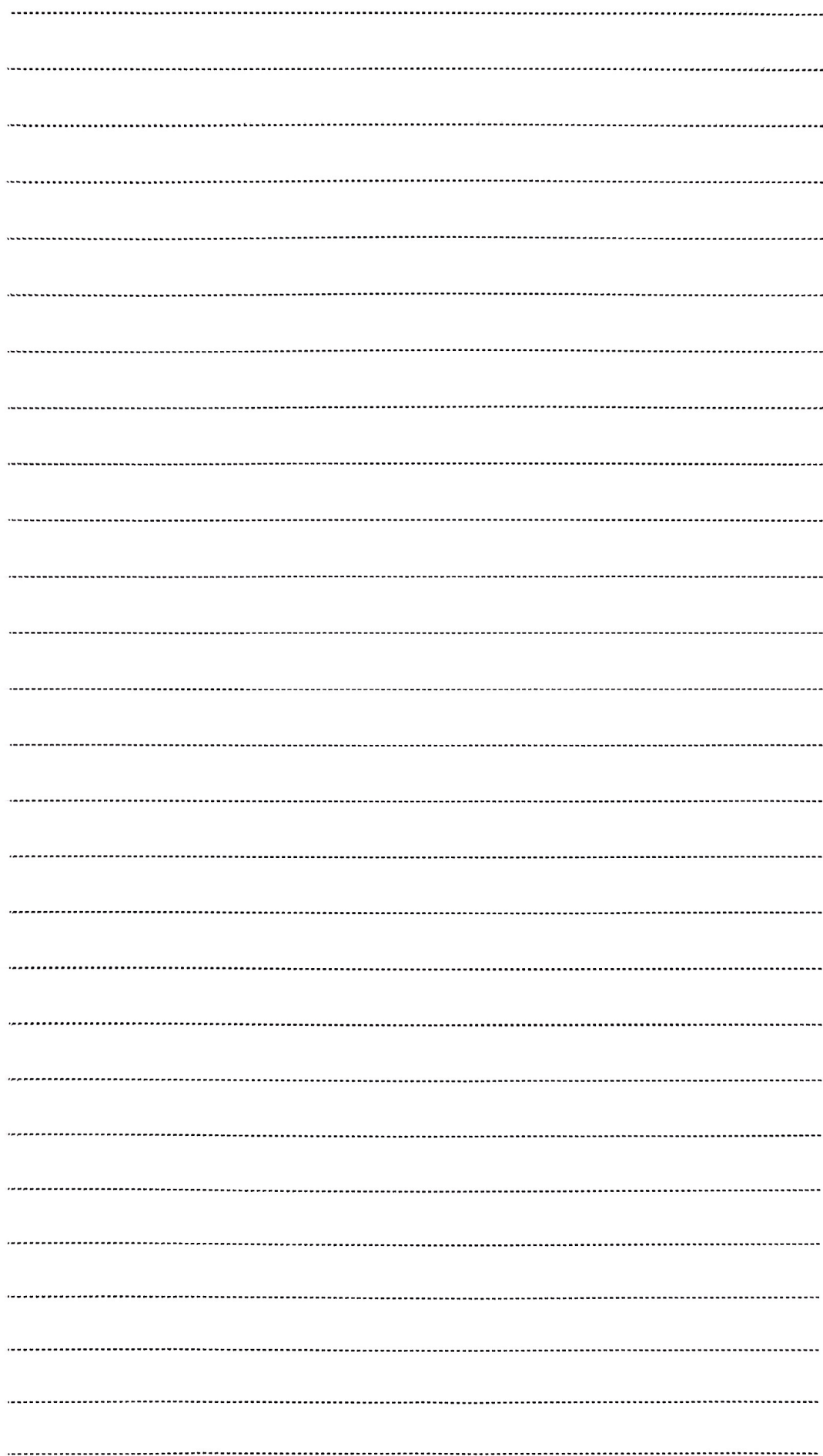
Content: Ch.9 Trigonometric Relations

1. In the figure, $AEFG$, BFC and BGD are straight lines. $\angle ABC = 30^\circ$, $\angle CBD = 45^\circ$ and $\angle ACB = \angle AEC = \angle AGD = \angle BDC = 90^\circ$. Let $CD = a$.



- (a) Express the lengths of AC and BC in terms of a .
 (b) Hence, find the value of $\sin 75^\circ$.





2. Without using a calculator, find the values of the following expressions.

(a) $\cos^2 3^\circ + \cos^2 6^\circ + \cos^2 9^\circ + \dots + \cos^2 45^\circ + \dots + \cos^2 81^\circ + \cos^2 84^\circ + \cos^2 87^\circ$

(b) $\frac{\tan 1^\circ \tan 3^\circ \tan 5^\circ \dots \tan 85^\circ \tan 87^\circ \tan 89^\circ}{\sin^2 1^\circ + \sin^2 2^\circ + \sin^2 3^\circ + \dots + \sin^2 87^\circ + \sin^2 88^\circ + \sin^2 89^\circ}$

This image shows a full page of a handwriting practice worksheet. It consists of multiple sets of three horizontal dashed lines, providing a guide for letter height and placement. The lines are evenly spaced across the entire page, leaving ample room for writing practice. There is no text or other markings on the page.

(Challenging_3B09_e Q.10)

Handwriting practice lines consisting of 24 horizontal dotted lines.

(Challenging_3B09_e Q.11)

END OF ASSIGNMENT