

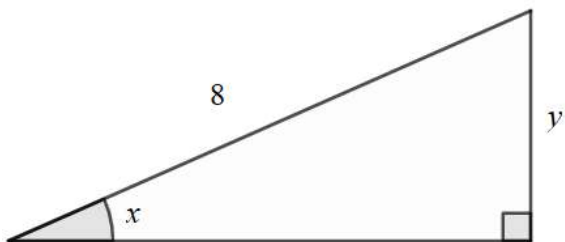
(52) Trigonometry (Exact Values)

WORKING AT D/E

(1) Without a calculator, find the exact value of each.

- (a) $\tan(60^\circ)$
- (b) $\sin(45^\circ)$
- (c) $\cos(30^\circ)$
- (d) $\sin(60^\circ)$
- (e) $\cos(90^\circ)$
- (f) $\tan(30^\circ)$
- (g) $\sin(360^\circ)$
- (h) $\cos(180^\circ)$
- (i) $\tan(90^\circ)$
- (j) $\cos(45^\circ)$

(2) Given that $\sin(x) = 0.4$ show that the $y = 3.2$



(3) $\sin(a) = \cos(a)$ where a is a positive acute angle. Write down the value of a .

WORKING AT B/C

(1) Without a calculator, find the exact value of each:

- (a) $\tan(-30^\circ)$
- (b) $\sin(225^\circ)$
- (c) $\cos(-60^\circ)$
- (d) $\sin(-60^\circ)$
- (e) $\cos(135^\circ)$
- (f) $\tan(210^\circ)$
- (g) $\sin(-90^\circ)$
- (h) $\cos(210^\circ)$
- (i) $\tan(330^\circ)$
- (j) $\cos(300^\circ)$

(2) $\sin(b) = \cos(b)$ where b is a positive obtuse angle. Write down the value of b .

(3) Without a calculator, show that

$$\tan(60) + 3 \tan(-30) = 0$$

WORKING AT A*/A

(1) In the interval $0 \leq x \leq 360$, how many times will the $\sin(2x) = a$ where a is a constant and $0 < a < -1$?