

Jawapan

Praktis 5

Praktis Formatif

- 1 A Salah/Wrong
 B Salah/Wrong
 C Betul/Correct
 D Salah/Wrong

Jawapan/Answer: C

2 $\sin \theta = \frac{2}{5}$

$$\frac{16}{x} = \frac{2}{5}$$

$$2x = 80$$

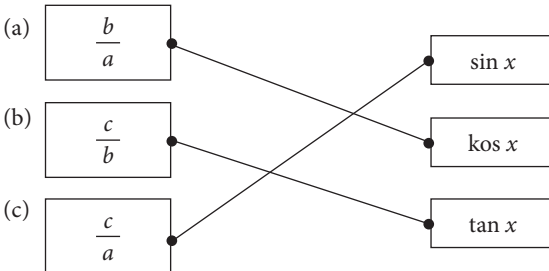
$$x = 40$$

Jawapan/Answer: D

3

Segi tiga Triangle	Sisi bertentangan Opposite side	Sisi bersebelahan Adjacent side
(a) PQR	PQ	QR
(b) PRS	PR	PS

4



- 5 (a) (i) $\frac{BE}{AE} = \frac{CF}{AF} = \frac{DG}{AG}$
 (ii) $\frac{AB}{AE} = \frac{AC}{AF} = \frac{AD}{AG}$
 (iii) $\frac{BE}{AB} = \frac{CF}{AC} = \frac{DG}{AD}$

- (b) (i) Nisbah sisi bertentangan kepada hipotenus bagi suatu sudut x kekal sama walaupun saiz segi tiga berubah.
The ratio of the opposite side to the hypotenuse of angle x remains the same even though the size of triangle varies.

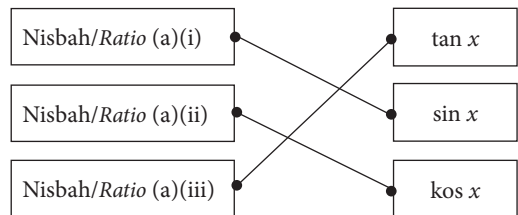
- (ii) Nisbah sisi bersebelahan kepada hipotenus bagi suatu sudut x kekal sama walaupun saiz segi tiga berubah.

The ratio of the adjacent side to the hypotenuse of angle x remains the same even though the size of triangle varies.

- (iii) Nisbah sisi bertentangan kepada sisi bersebelahan bagi suatu sudut x kekal sama walaupun saiz segi tiga berubah.

The ratio of the opposite side to the adjacent side of angle x remains the same even though the size of triangle varies.

(c)



6

Segi tiga Triangle	Sisi bertentangan Opposite side Hipotenus Hypotenuse	Sisi bersebelahan Adjacent side Hipotenus Hypotenuse	Sisi bersebelahan Opposite side Sisi bersebelahan Adjacent side
ABC	$\frac{2}{7.2} = 0.278$	$\frac{7}{7.2} = 0.972$	$\frac{2}{7} = 0.286$
ABD	$\frac{4}{8.1} = 0.494$	$\frac{7}{8.1} = 0.864$	$\frac{4}{7} = 0.571$
ABE	$\frac{6}{9.1} = 0.659$	$\frac{7}{9.1} = 0.769$	$\frac{6}{7} = 0.857$

- (b) (i) Nilai sinus bertambah dengan saiz sudut.

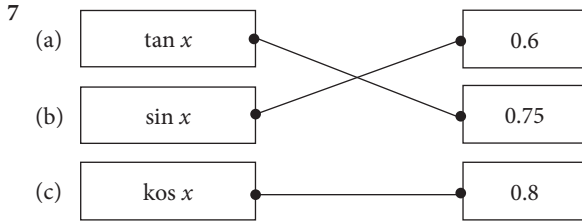
The value of sine increases with the size of angle.
 Betul/Correct

- (ii) Nilai kosinus berkurang dengan saiz sudut.

The value of cosine decreases with the size of angle.
 Salah/Wrong

- (iii) Nilai tangen bertambah apabila saiz sudut berkurang.

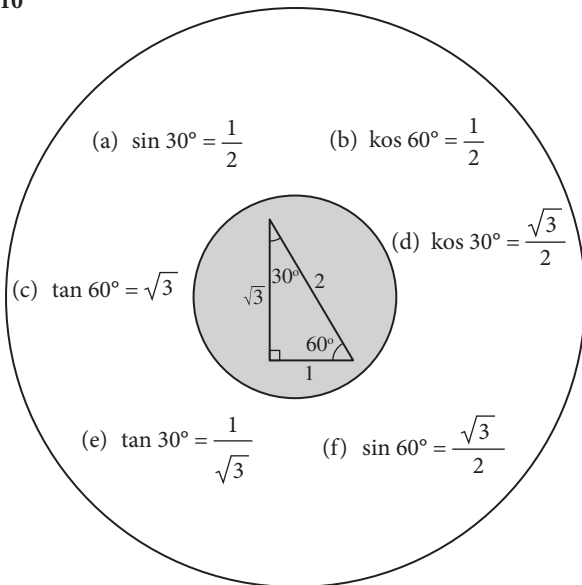
The value of tangent increases when the size of angle decreases.
 Salah/Wrong



8 $PQ^2 = 65^2 - 25^2$
 $= 3\,600$
 $PQ = 60$ cm
 $\text{kos } \theta = \frac{60}{65}$
 $= \frac{12}{13}$

9 (a) $PQ^2 = 15^2 - 10^2$
 $= 225 - 100$
 $PQ = 11.18$ cm
 (b) $\tan \theta = \frac{11.18}{10}$
 $= 1.118$
 (c) $\sin \theta = \frac{11.18}{15}$
 $= 0.7453$

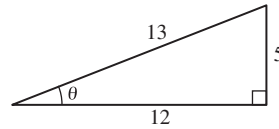
10



11 (a) $\frac{LM}{20} = \frac{7}{10}$
 $LM = \frac{7}{10} \times 20$
 $= 14$ cm
 (b) $\frac{PQ}{8} = 1.4$
 $PQ = 1.4 \times 8$
 $= 11.2$ cm

(c) $\frac{35}{AC} = \frac{7}{8}$
 $AC = \frac{8}{7} \times 35$
 $= 40$ cm

12 (a)



(b) (i) $\sin \theta = \frac{5}{13}$
 (ii) $\text{kos } \theta = \frac{12}{13}$

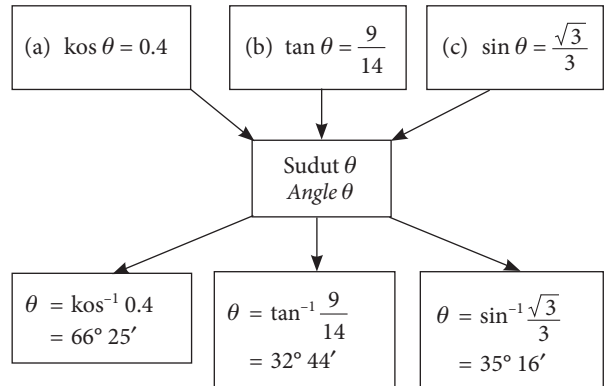
13 (a) $\sin x = \frac{2}{3}$

$\frac{12}{BC} = \frac{2}{3}$
 $2BC = 36$
 $BC = 18$ cm [✓]

(b) $BC = 3BE$
 $18 = 3BE$
 $BE = 6$ cm
 $DE^2 = 10^2 - 6^2$
 $= 100 - 36$
 $= 64$

$DE = 8$ cm
 $\tan y = \frac{8}{6}$
 $= \frac{4}{3}$ [✗]

14



15 $\text{kos } \angle PRQ = \frac{4.8}{9.6}$
 $= \frac{1}{2}$
 $\angle PRQ = 60^\circ$

Jawapan/Answer: D

16 (a) $RS^2 = 8^2 + 6^2$
 $= 64 + 36$
 $= 100$
 $RS = 10$ cm

$$\begin{aligned} \cos y &= \frac{6}{10} \\ &= \frac{3}{5} \quad [\times] \end{aligned}$$

$$(b) \sin x = \frac{5}{13}$$

$$\frac{MQ}{13} = \frac{5}{13}$$

$$MQ = 5 \text{ cm}$$

$$MP^2 = 13^2 - 5^2$$

$$= 169 - 25$$

$$= 144$$

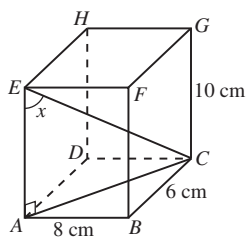
$$MP = 12 \text{ cm}$$

$$MR = 5 \text{ cm}$$

$$PR = 12 \text{ cm} - 5 \text{ cm}$$

$$= 7 \text{ cm} \quad [\checkmark]$$

17



$$AC^2 = 8^2 + 6^2$$

$$= 64 + 36$$

$$= 100$$

$$AC = 10 \text{ cm}$$

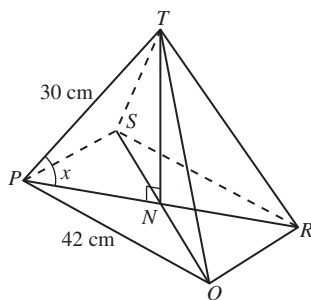
$$\tan x = \frac{AC}{AE}$$

$$= \frac{10}{10}$$

$$= 1$$

$$x = 45^\circ$$

18



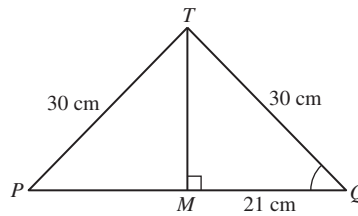
$$(a) \sin x = \frac{11}{15}$$

$$\frac{NT}{30} = \frac{11}{15}$$

$$NT = \frac{11}{15} \times 30$$

$$= 22 \text{ cm}$$

(b)



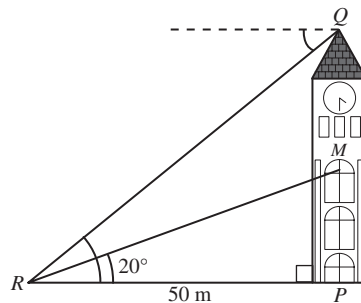
$$\cos \angle PQT = \frac{21}{30}$$

$$= 0.7$$

$$\angle PQT = \cos^{-1} 0.7$$

$$= 45^\circ 34'$$

19



$$(a) \frac{PM}{50} = \tan 20^\circ$$

$$PM = 50 \times \tan 20^\circ$$

$$= 18.2 \text{ m}$$

$$PQ = 2 \times 18.2 \text{ m}$$

$$= 36.4 \text{ m}$$

Tinggi menara ialah 36.4 m.

The height of the tower is 36.4 m.

$$(b) \tan \angle PRQ = \frac{36.4}{50}$$

$$= 0.728$$

$$\angle PRQ = \tan^{-1} 0.728$$

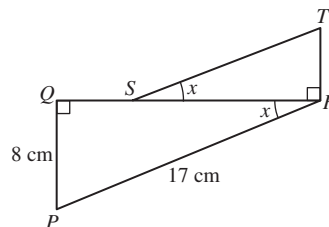
$$= 36^\circ 3'$$

Sudut tunduk R dari Q ialah $36^\circ 3'$.

The angle of depression of R from Q is $36^\circ 3'$.

Praktis Sumatif

1



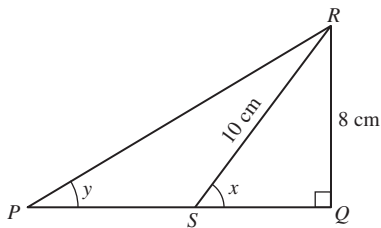
$$\sin x = \frac{8}{17}$$

$$PR = 17 \text{ cm}$$

$$\begin{aligned}
 QR^2 &= 17^2 - 8^2 \\
 &= 289 - 64 \\
 &= 225 \\
 QR &= 15 \text{ cm} \\
 RS &= 15 \text{ cm} - 3 \text{ cm} \\
 &= 12 \text{ cm} \\
 \tan x &= \frac{8}{15} \\
 \frac{RT}{12} &= \frac{8}{15} \\
 RT &= \frac{8}{15} \times 12 \\
 &= 6.4 \text{ cm}
 \end{aligned}$$

Jawapan/Answer: **B**

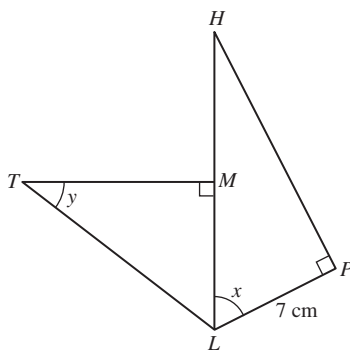
2



$$\begin{aligned}
 QS^2 &= 10^2 - 8^2 \\
 &= 100 - 64 \\
 &= 36 \\
 QS &= 6 \text{ cm} \\
 PQ &= 12 \text{ cm} \\
 \tan x - \tan y &= \frac{8}{6} - \frac{8}{12} \\
 &= \frac{8}{12} \\
 &= \frac{2}{3}
 \end{aligned}$$

Jawapan/Answer: **B**

3



$$\begin{aligned}
 \cos x &= \frac{7}{25} \\
 \frac{7}{HL} &= \frac{7}{25} \\
 HL &= 2.5 \text{ cm}
 \end{aligned}$$

$$\begin{aligned}
 LM &= \frac{1}{2} \times 25 \text{ cm} \\
 &= 12.5 \text{ cm}
 \end{aligned}$$

$$\sin y = \frac{5}{8}$$

$$\frac{12.5}{LT} = \frac{5}{8}$$

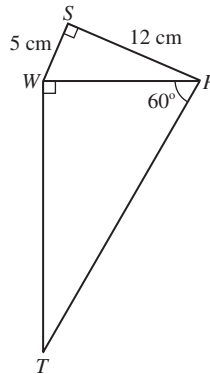
$$5LT = 12.5 \times 8$$

$$5LT = 100$$

$$LT = 20 \text{ cm}$$

Jawapan/Answer: **A**

4



$$\begin{aligned}
 PW^2 &= 12^2 + 5^2 \\
 &= 144 + 25 \\
 &= 169
 \end{aligned}$$

$$PW = 13 \text{ cm}$$

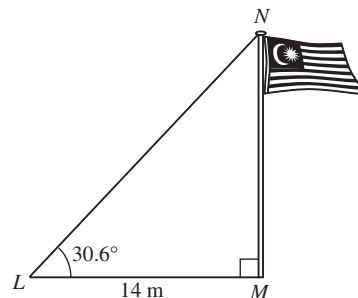
$$\cos 60^\circ = \frac{13}{PT}$$

$$\frac{1}{2} = \frac{13}{PT}$$

$$PT = 26 \text{ cm}$$

Jawapan/Answer: **B**

5

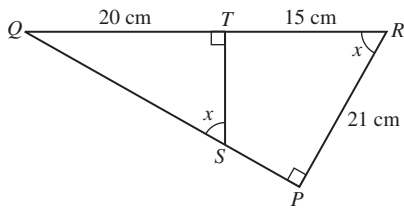


$$\frac{MN}{14} = \tan 30.6^\circ$$

$$\begin{aligned}
 MN &= 14 \times \tan 30.6^\circ \\
 &= 8.28 \text{ m}
 \end{aligned}$$

Jawapan/Answer: **A**

6



$$\begin{aligned} \text{(a) } PQ^2 &= 35^2 - 21^2 \\ &= 1\,225 - 441 \\ &= 784 \end{aligned}$$

$$PQ = 28 \text{ cm}$$

$$\begin{aligned} \tan x &= \frac{28}{21} \\ &= \frac{4}{3} \end{aligned}$$

$$\text{(b) } QT : QR = 4 : 7$$

$$\frac{QT}{QR} = \frac{4}{7}$$

$$\frac{QT}{35} = \frac{4}{7}$$

$$\begin{aligned} QT &= \frac{4}{7} \times 35 \\ &= 20 \text{ cm} \end{aligned}$$

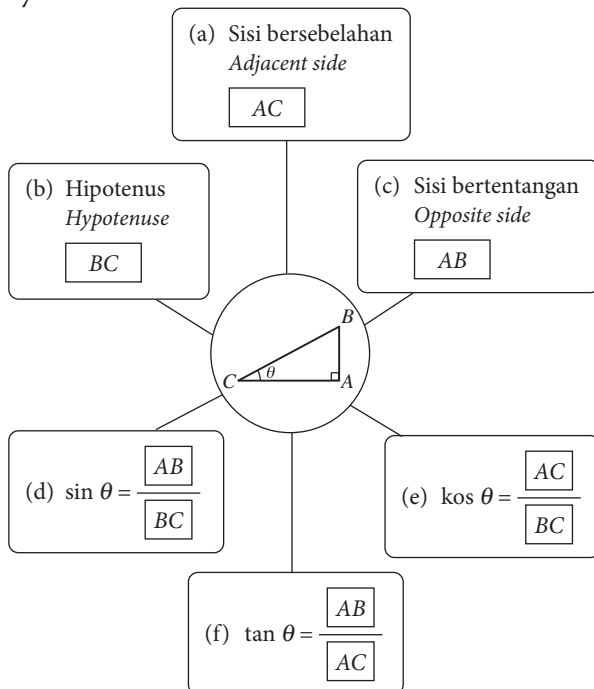
$$\tan x = \frac{4}{3}$$

$$\frac{20}{ST} = \frac{4}{3}$$

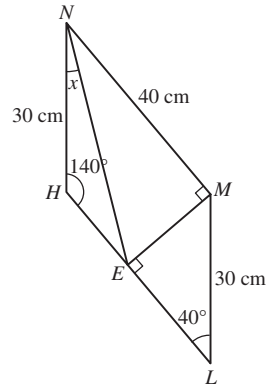
$$4ST = 60$$

$$ST = 15 \text{ cm}$$

7



8



$$\text{(a) } \frac{EM}{LM} = \sin 40^\circ$$

$$\frac{EM}{30} = \sin 40^\circ$$

$$\begin{aligned} EM &= 30 \times \sin 40^\circ \\ &= 19.28 \text{ cm} \end{aligned}$$

$$\text{(b) } \tan \angle ENM = \frac{19.28}{40}$$

$$= 0.482$$

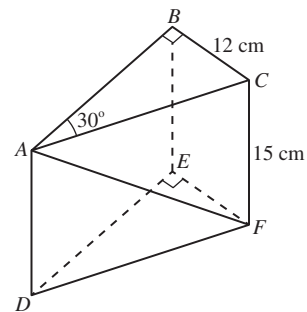
$$\angle ENM = \tan^{-1} 0.482$$

$$= 25^\circ 44'$$

$$x = 40^\circ - 25^\circ 44'$$

$$= 14^\circ 16'$$

9



$$\text{(a) } \frac{12}{AC} = \sin 30^\circ$$

$$\frac{12}{AC} = \frac{1}{2}$$

$$AC = 24 \text{ cm}$$

$$\text{(b) } \tan \angle AFC = \frac{AC}{CF}$$

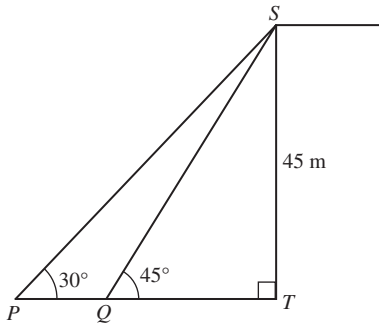
$$= \frac{24}{15}$$

$$= 1.6$$

$$\angle AFC = \tan^{-1} 1.6$$

$$= 58^\circ$$

10



$$\frac{45}{PT} = \tan 30^\circ$$

$$PT = \frac{45}{\tan 30^\circ}$$

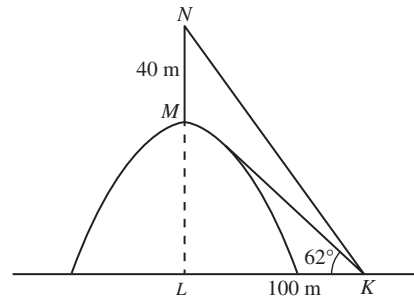
$$= 77.94 \text{ m}$$

$$QT = 45 \text{ m}$$

$$PQ = 77.94 \text{ m} - 45 \text{ m}$$

$$= 32.9 \text{ m}$$

11



$$(a) \frac{LM}{100} = \tan 62^\circ$$

$$LM = 100 \times \tan 62^\circ$$

$$= 188 \text{ m}$$

$$(b) LN = 188 \text{ m} + 40 \text{ m}$$

$$= 228 \text{ m}$$

$$\tan \angle LKN = \frac{228}{100}$$

$$= 2.28$$

$$\angle LKN = \tan^{-1} 2.28$$

$$= 66^\circ 19'$$

$$\angle MKN = 66^\circ 19' - 62^\circ$$

$$= 4^\circ 19'$$