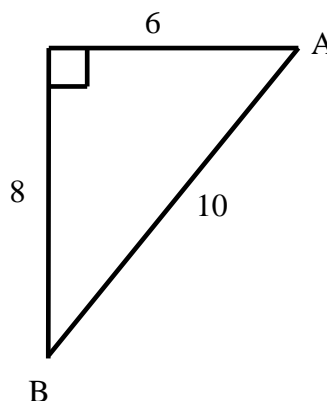


# MATHEMATICS 1201

## UNIT REVIEW – TRIGONOMETRY

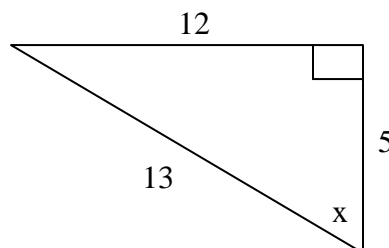
1. Which is the correct trigonometric ratio for  $\cos A$  in the diagram below? 1. \_\_\_\_\_

- (A)  $\frac{8}{6}$       (B)  $\frac{6}{8}$   
 (C)  $\frac{6}{10}$       (D)  $\frac{8}{10}$



2. Which represents the correct trigonometric equation for the diagram below? 2. \_\_\_\_\_

- (A)  $\tan x = \frac{5}{12}$   
 (B)  $\cos x = \frac{12}{13}$   
 (C)  $\sin x = \frac{5}{13}$   
 (D)  $\sin x = \frac{12}{13}$



3. Evaluate  $\tan 60^\circ$ . 3. \_\_\_\_\_

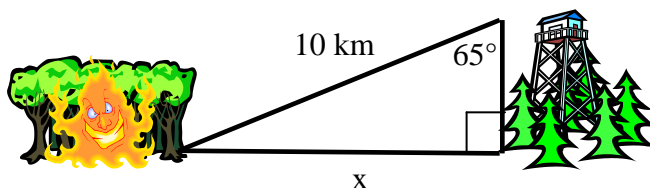
- (A) 1.732      (B) 0.866      (C) 0.5      (D) 0.32

4. What is the measure of angle  $x$  for  $\cos x = \frac{5}{10}$ ? 4. \_\_\_\_\_

- (A)  $27^\circ$       (B)  $30^\circ$       (C)  $45^\circ$       (D)  $60^\circ$

5. A forest ranger spots a fire from a tower at an angle of  $65^\circ$ . Which trigonometric equation can help determine the horizontal distance  $x$  from the tower to the fire? 5. \_\_\_\_\_

- (A)  $\tan 65 = \frac{x}{10}$       (B)  $\sin 65 = \frac{x}{10}$   
 (C)  $\cos 65 = \frac{x}{10}$       (D)  $\sin 65 = \frac{10}{x}$



6. Determine the value of  $x$ :  $\tan 24 = \frac{8}{x}$  6. \_\_\_\_\_

- (A)  $x = 3.56$       (B)  $x = 8.76$       (C)  $x = 17.97$       (D)  $x = 19.67$

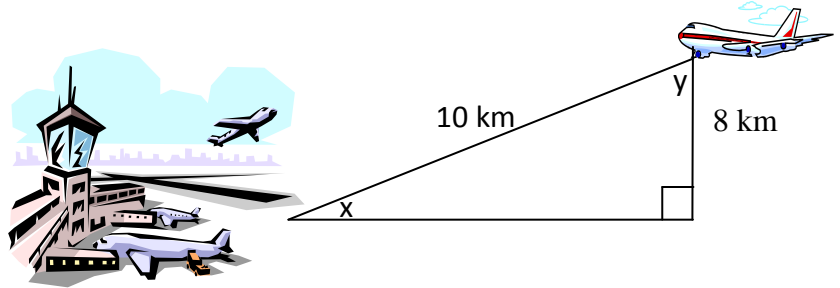
7. Which represents the correct equation to determine angle of inclination? 7. \_\_\_\_\_

(A)  $\sin x = \frac{8}{10}$

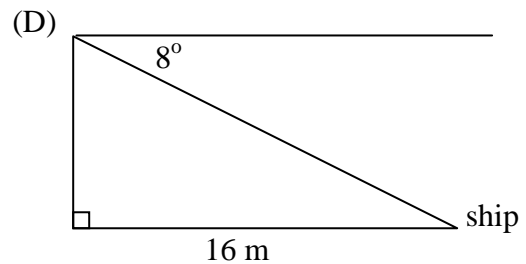
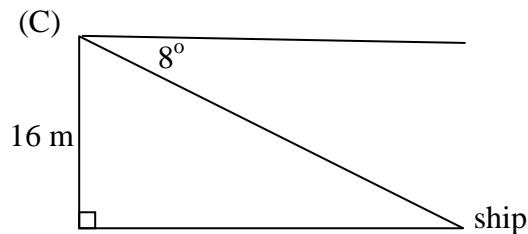
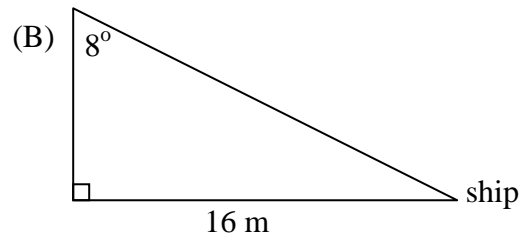
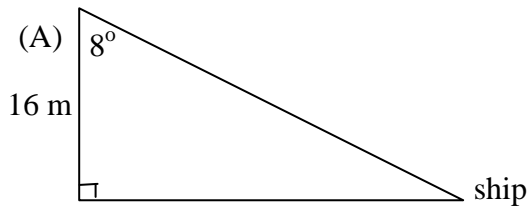
(B)  $\cos y = \frac{8}{10}$

(C)  $\tan x = \frac{8}{10}$

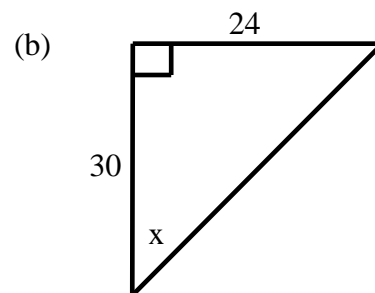
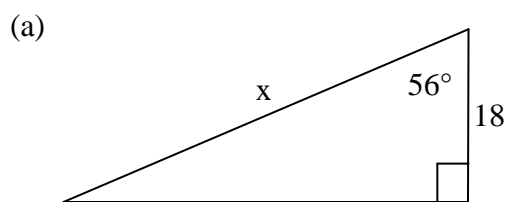
(D)  $\sin y = \frac{8}{10}$



8. From the top of a cliff 16 m above sea level, the angle of depression of a passing ship is  $8^\circ$ . Which drawing best illustrates this situation? 8. \_\_\_\_\_

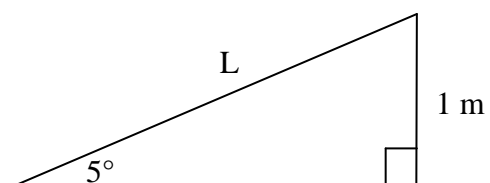


9. Determine the value of  $x$  for each right triangle given below.

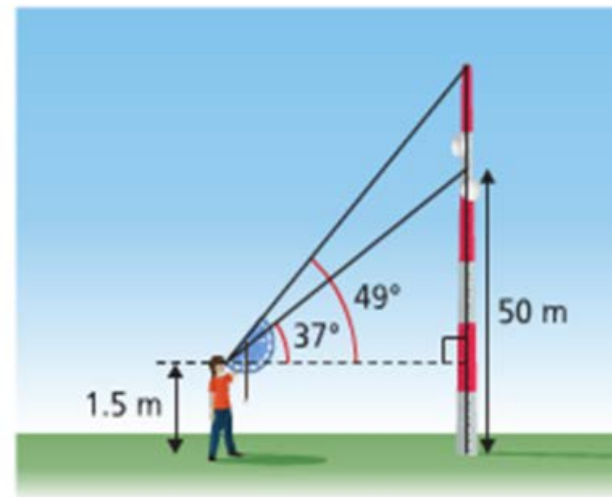


10. A mining tunnel runs beneath the earth's surface and drops 100 m vertically for every 500 m it runs horizontally. Sketch a diagram and use it to determine the angle of depression of the mining tunnel.

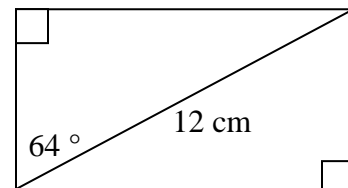
11. A ramp has to be constructed at the entrance of a house for the homeowner to have wheelchair access. The vertical drop from the door straight down is 1 m. The angle of inclination from the ground to the door is  $5^\circ$ . Determine the length,  $L$ , of the ramp.



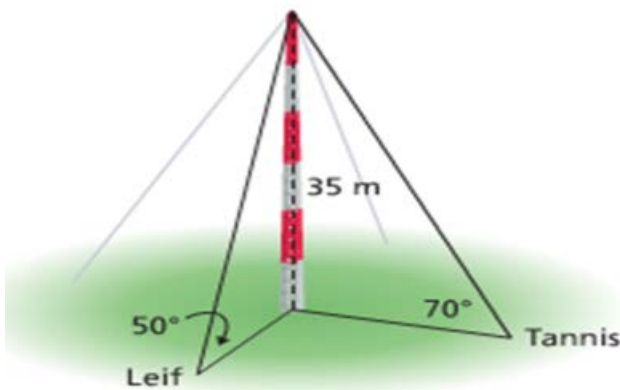
12. A student uses a clinometer to measure the angle of elevation of a sign that marks the point on a tower that is 50 m above the ground. The angle of elevation is  $37^\circ$  and the student holds the clinometer 1.5 m above the ground. She then measures the angle of elevation of the top of the tower as  $49^\circ$ . Determine the height of the tower to the nearest tenth of a metre. The diagram is *not* drawn to scale.



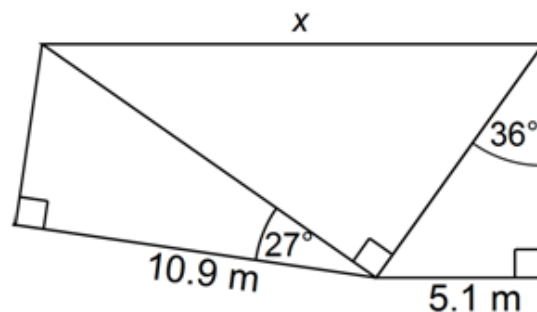
13. Using trigonometric ratios determine the perimeter of the following rectangle.



14. A communications tower is 35 m tall. From a point due north of the tower, Tannis measures the angle of elevation of the top of the tower as  $70^\circ$ . Her brother Leif, who is due east of the tower, measures the angle of elevation of the top of the tower as  $50^\circ$ . How far apart are the students to the nearest metre? The diagram is *not* drawn to scale.



15. Determine the value of  $x$  to the nearest tenth of a metre.



Answers:

1. C 2. D 3. A 4. D 5. B 6. C 7. A 8. C 9.(a) 32.2 (b) 38.7 10.  $11.3^\circ$   
 11.  $L = 11.5$  m 12. 75.6 m 13. 32.2 cm 14. 32 m 15.  $x = 15.0$  m