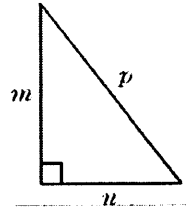


PRE CALCULUS 11  
TRIGONOMETRY PRACTICE TEST

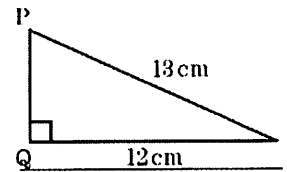
1. For this triangle, which statement demonstrates the Pythagorean Property?

- a)  $m^2 + n^2 = p^2$       b)  $m^2 + p^2 = n^2$       c)  $n^2 + p^2 = m^2$   
 d)  $n + p = m$       e)  $m + n = p$



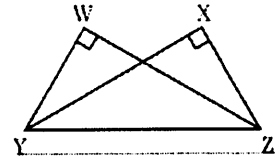
2. In the right triangle shown, what is the length of PQ?

- a) 1 cm      b) 5 cm      c) 9 cm      d) 12 cm      e)  $\sqrt{313}$  cm



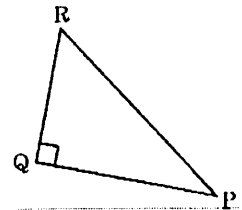
3. Name the hypotenuse of  $\triangle XYZ$ .

- a) YZ      b) XY      c) XZ      d) WX      e) WY



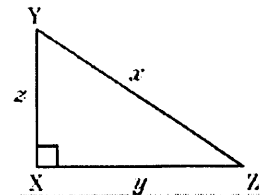
4. Name the side(s) opposite  $\angle Q$ .

- a) PR only      b) QR only      c) PQ only      d) PQ and QR      e) PR and PQ



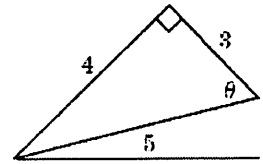
5. In the right triangle, side z is the:

- a) side adjacent the  $90^\circ$  angle only  
 b) side opposite the  $90^\circ$  angle only  
 c) side opposite the right angle only  
 d) hypotenuse only  
 e) side adjacent to the right angle and hypotenuse



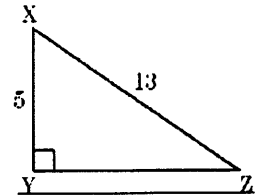
6. Given the following triangle,  $\cos \theta =$  \_\_\_\_\_

- a)  $\frac{3}{5}$       b)  $\frac{3}{4}$       c)  $\frac{4}{5}$       d)  $\frac{4}{3}$       e)  $\frac{5}{3}$



7. In  $\triangle XYZ$ , what is the value of  $\tan Z$ ?

- a)  $\frac{5}{13}$       b)  $\frac{5}{12}$       c)  $\frac{12}{13}$       d)  $\frac{12}{5}$       e)  $\frac{13}{5}$



8. Find  $\sin 40^\circ$  to three decimal places.

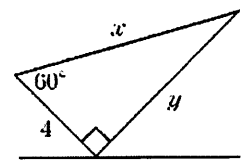
- a) 0.643      b) 0.766      c) 0.839      d) 0.996      e) 1.192

9. Find  $m\angle A$  to the nearest degree given  $\tan A = 3.2452$ .

- a)  $0^\circ$       b)  $18^\circ$       c)  $25^\circ$       d)  $73^\circ$       e)  $90^\circ$

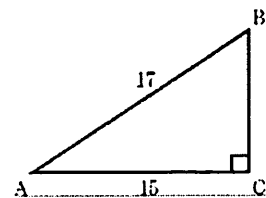
10. Which of the following statements is *incorrect*?

- a)  $x = 8$       b)  $\sin 30^\circ = \frac{4}{x}$       c)  $\sin 60^\circ = \frac{4}{x}$   
 d)  $\cos 60^\circ = \frac{4}{x}$       e)  $16 = x^2 - y^2$



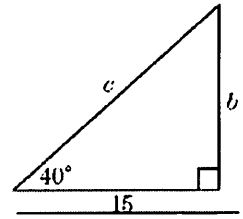
11. In the triangle shown, find  $m\angle B$  to the nearest degree.

- a)  $8^\circ$       b)  $16^\circ$       c)  $28^\circ$       d)  $41^\circ$       e)  $62^\circ$



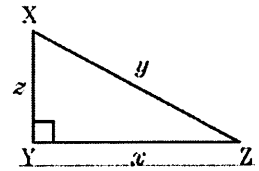
12. Find the value of  $c$  to the nearest unit.

- a) 20      b) 21      c) 23      d) 24      e) 28



13. If  $x = 30$  and  $y = 60$ , what is the measure of  $\angle Z$  to the nearest degree?

- a)  $21^\circ$       b)  $42^\circ$       c)  $55^\circ$       d)  $60^\circ$       e)  $77^\circ$



14. A kite held by 125 m of string makes an angle of elevation with the ground of  $45^\circ$ . About how high is the kite above the ground?

- a) 62.8 m      b) 75.1 m      c) 88.4 m      d) 113.6 m      e) 125.0 m

15. Determine the approximate value of the cosine of an angle measuring  $172^\circ$ .

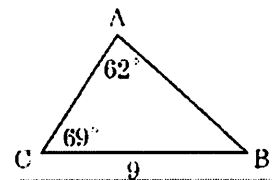
- a) -0.990      b) -0.706      c) 0.139      d) 0.709      e) 0.990

16. Given that  $0^\circ \leq \angle D \leq 180^\circ$ , determine the value(s) of  $\angle D$  to the nearest degree when  $\sin D = 0.5736$ .

- a)  $35^\circ$       b)  $55^\circ$       c)  $145^\circ$       d)  $35^\circ, 55^\circ$       e)  $35^\circ, 145^\circ$

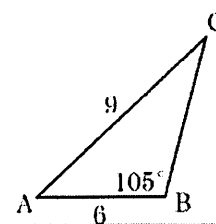
17. Calculate the length of AB in  $\triangle CAB$  to 1 decimal place.

- a) 6.9      b) 8.5      c) 9.5      d) 10.2      e) 11.8



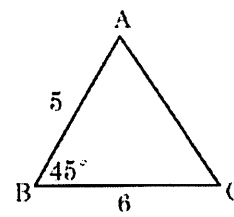
18. Calculate the measure of  $\angle C$  in  $\triangle BCA$  to the nearest tenth of a degree.

- a)  $9.9^\circ$       b)  $40.1^\circ$       c)  $41.8^\circ$       d)  $44.6^\circ$       e)  $49.9^\circ$



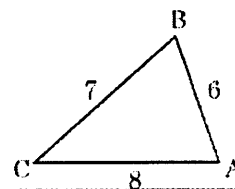
19. Calculate the length of AC in  $\triangle BAC$  to 1 decimal place.

- a) 4.3      b) 6.3      c) 8.6      d) 10.2      e) 18.6

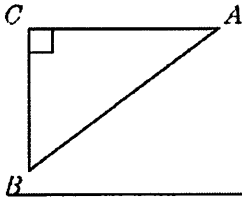


20. Calculate the measure of  $\angle A$  in  $\triangle CBA$  to the nearest tenth of a degree.

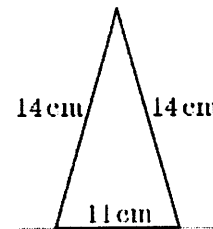
- a)  $32.1^\circ$       b)  $43.4^\circ$       c)  $46.6^\circ$       d)  $57.9^\circ$       e)  $75.5^\circ$



21. Solve the right triangle if  $a = 42$  inches and  $c = 50$  inches. Give lengths to 3 significant figures and angles to the nearest tenth of a degree.



22. Determine the measures, to the nearest tenth of a degree, of all the angles in the isosceles triangle.



23. Solve  $\triangle PQR$  given that  $\angle P = 120^\circ$ ,  $p = 8$  cm, and  $q = 3$  cm. Make measurements correct to 1 decimal place.

24. When a 46 foot tall radio antenna casts a 20 foot long shadow, what is the angle of elevation of the sun?

25. You are at the top of a building 418 feet tall. As you look down at a nearby smaller building, you observe that the angle of depression of the base is  $77^\circ$  and the angle of depression of the top is  $46^\circ$ . Find the height of the smaller building and the horizontal distance between the buildings.

26. How many distinct triangles are possible if  $\angle X = 30^\circ$ ,  $x = 8$ , and  $y = 12$ ?

27. Two planes take off at the same time from the same base. One is travelling at 900 km per hour, the other is travelling at 1200 km per hour. If the angle between their courses is  $32^\circ$ , approximately how far apart are the planes after 40 minutes?

PRE CALCULUS 11 TRIGONOMETRY PRACTICE TEST 3/7/00

**Answer List**

1. a	2. b	3. a
4. a	5. a	6. a
7. b	8. a	9. d
10. c	11. c	12. a
13. d	14. c	15. a
16. e	17. c	18. b
19. a	20. d	21. $\angle A \approx 57.1^\circ$ , $\angle B \approx 32.9^\circ$ , $b = \sqrt{736} \approx 27.1 \text{ in.}$
22. $66.9^\circ$ , $66.9^\circ$ , $46.3^\circ$	23. $\angle Q = 19.0$ , $\angle R = 41.0$ , $r = 6.0 \text{ cm}$	24. $\approx 66.5^\circ$
25. 318.1 ft; 96.5 ft	26. 2	27. 431.1 km

**Catalog List**

1. CM2 IA 10	2. CM2 IA 28	3. CM2 JA 4
4. CM2 JA 10	5. CM2 JA 17	6. CM2 JA 38
7. CM2 JA 44	8. CM2 JA 86	9. CM2 JA 90
10. CM2 JA 106	11. CM2 JB 8	12. CM2 JB 26
13. CM2 JB 48	14. CM2 JF 4	15. AW1 HE 12
16. AW1 HE 26	17. AW1 HG 2	18. AW1 HG 6
19. AW1 HH 2	20. AW1 HH 6	21. TRI MI 16
22. AW1 HF 6	23. AW1 HF 4	24. TRI ML 14
25. TRI ML 53	26. CM1 HE 53	27. CM1 HE 28