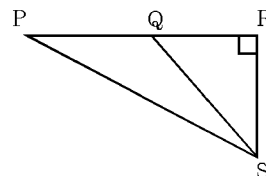


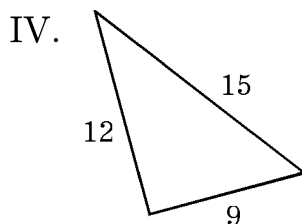
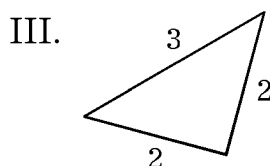
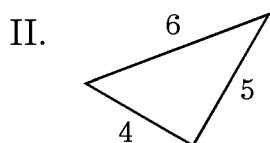
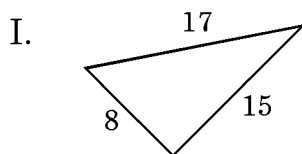
Name:

1. Identify the hypotenuse in  $\triangle QRS$ .

- a)  $\overline{PR}$     b)  $\overline{SR}$     c)  $\overline{QR}$     d)  $\overline{QS}$     e)  $\overline{PS}$



2. Determine which of the following triangles are right triangles.

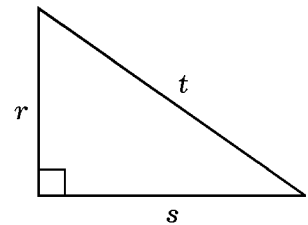


- a) I only                      b) II only                      c) III only  
 d) I and IV only            e) I, II and IV

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

a)  $r^2 + t^2 = s^2$     b)  $s^2 + t^2 = r^2$     c)  $r^2 + s^2 = t^2$

d)  $s = r + 0$     e)  $s = r + t$

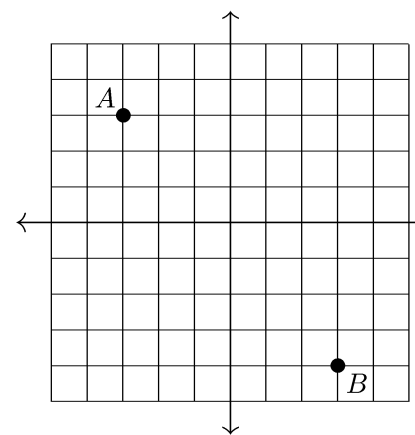


4. The legs of a right triangle are 6 cm and 8 cm long. How long is the hypotenuse of this triangle?

a)  $\sqrt{48}$  cm    b) 10 cm    c) 11 cm    d) 12 cm    e) 100 cm

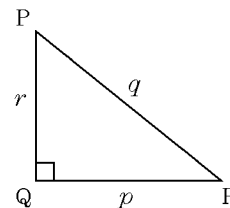
5. Draw line segment  $AB$  on the coordinate plane. Find the length of line segment  $AB$  to the nearest tenth.

a) 4.9    b) 6.1    c) 8.8    d) 9.2    e) 10.0



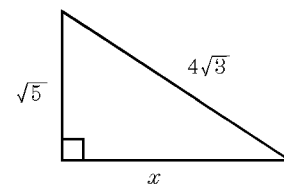
6. In  $\triangle PQR$ ,  $r = 9$  and  $q = 41$ . Calculate the length of side  $p$ .

- a) 32      b) 40      c) 43      d) 50      e) 53



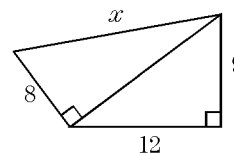
7. Determine the exact length of side  $x$  in the triangle.

- a)  $\sqrt{7}$       b)  $\sqrt{17}$       c)  $\sqrt{43}$       d)  $\sqrt{53}$       e)  $2\sqrt{23}$



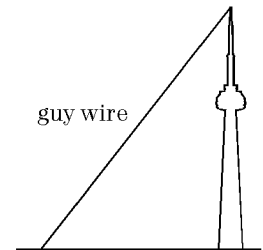
8. Find the length of side  $x$ .

- a) 16      b) 17      c) 19      d) 20      e) 21



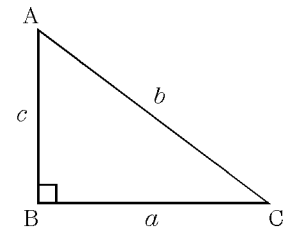
9. A guy wire attached to the top of a radio antenna is bolted to the ground 48 m from the base of the tower. If the wire is 90 m long, how high is the radio antenna? Express your answer to the nearest hundredth of a metre.

- a) 42.00 m                      b) 57.96 m                      c) 76.13 m  
 d) 89.35 m                      e) 102.00 m



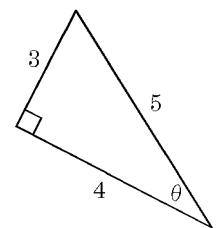
10. Express  $\sin A$  as a ratio of the variables given in  $\triangle ABC$ .

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



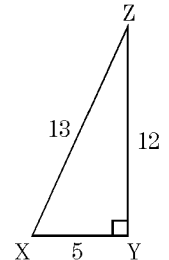
11. Given the following triangle,  $\cos \theta = \underline{\hspace{2cm}}$

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



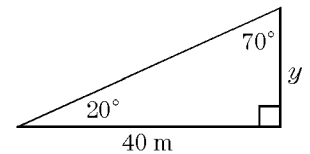
12. Determine the tangent of angle  $Z$  ( $\tan Z$ ).

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



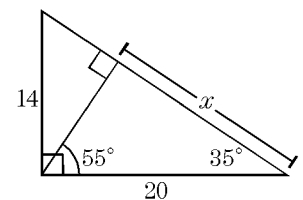
13. With the given triangle, which trigonometric ratio can be used to find side  $y$ ?

- a)  $\sin 20^\circ$       b)  $\sin 70^\circ$       c)  $\cos 20^\circ$   
 d)  $\cos 70^\circ$       e)  $\tan 20^\circ$



14. Which of the following equations can be used to find the length of  $x$ ?

- a)  $\sin 35^\circ = \frac{x}{14}$       b)  $\sin 35^\circ = \frac{14}{x}$       c)  $\cos 35^\circ = \frac{x}{20}$   
 d)  $\cos 35^\circ = \frac{20}{x}$       e)  $\tan 55^\circ = \frac{x}{30}$



15. A 6 m ladder leans against a vertical wall at an angle of  $70^\circ$  to the ground. What equation can be used to find the height the ladder reaches up the wall?

a)  $\cos 70^\circ = \frac{x}{6}$

b)  $\cos 70^\circ = \frac{6}{x}$

c)  $\sin 70^\circ = \frac{x}{6}$

d)  $\sin 70^\circ = \frac{6}{x}$

e)  $\tan 70^\circ = \frac{6}{x}$

- 
16. Find the measure of  $\angle C$  to the nearest degree.

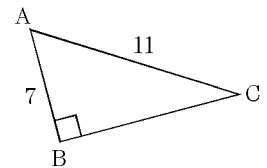
a)  $35^\circ$

b)  $39^\circ$

c)  $40^\circ$

d)  $50^\circ$

e)  $51^\circ$



- 
17. Find the degree measure of  $\angle E$  to one decimal place.

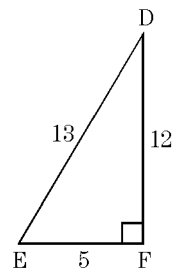
a)  $22.6^\circ$

b)  $24.6^\circ$

c)  $63.7^\circ$

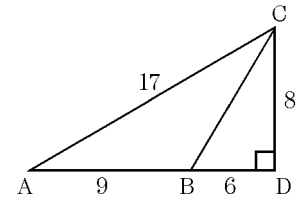
d)  $65.4^\circ$

e)  $67.4^\circ$



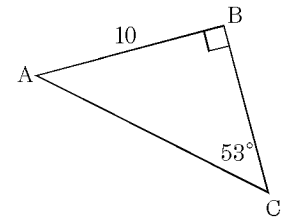
18. What is the measure of  $\angle BCD$  to the nearest degree?

- a)  $27^\circ$     b)  $37^\circ$     c)  $43^\circ$     d)  $53^\circ$     e)  $54^\circ$



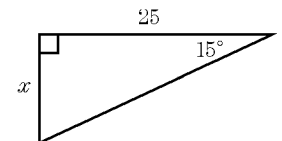
19. Find the length of  $\overline{AC}$  to the nearest tenth.

- a) 6.0    b) 7.0    c) 8.0    d) 12.5    e) 16.6



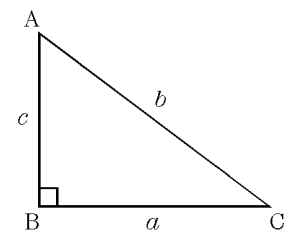
20. Find  $x$  to the nearest tenth.

- a) 6.5    b) 6.7    c) 24.2    d) 24.5    e) 93.3



21. To the nearest degree, find the measure of  $\angle A$  given  $a = 40$  and  $c = 30$ .

- a)  $15^\circ$     b)  $53^\circ$     c)  $54^\circ$     d)  $55^\circ$     e)  $56^\circ$



22. Given  $m\angle A = 54^\circ$  and  $c = 13$ , what is the length of  $a$  to one decimal place?

- a) 7.6      b) 9.4      c) 10.5      d) 16.0      e) 17.9

---

23. For  $\triangle ABC$ ,  $m\angle B = 90^\circ$ ,  $m\angle C = 30^\circ$ , and  $b = 5$ . What is the length of  $c$  to the nearest tenth?

- a) 2.5      b) 4.3      c) 5.7      d) 5.8      e) 10.0

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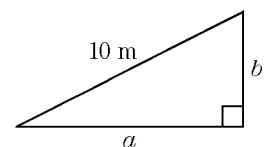
24. A kite held by 175 m of string makes an angle of elevation with the ground of  $45^\circ$ . About how high is the kite above the ground?

- a) 105.2 m      b) 123.7 m      c) 159.0 m      d) 175.0 m      e) 247.5 m

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25. In this diagram the side of the ramp is 10 m. If the angle of elevation of the ramp is  $17^\circ$ , what is the approximate height of the ramp?

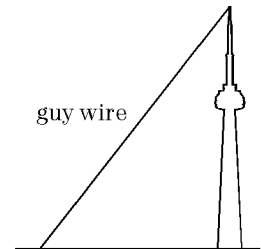
- a) 2.9 m      b) 3.1 m      c) 3.4 m      d) 3.6 m      e) 9.6 m





26. A guy wire attached to the top of a radio antenna is bolted to the ground 48 m from the base of the tower. If the wire makes an angle of  $14^\circ$  with the ground, how high is the radio antenna? Express your answer to 2 decimal places.

- a) 8.00 m                      b) 10.02 m                      c) 11.97 m  
d) 14.35 m                      e) 17.96 m

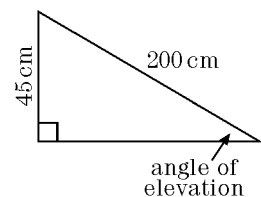


27. A woman whose eyes are 1.6 m above the ground finds that the angle of elevation to the top of her house is  $12^\circ$ . If she is 40 m from the base of her house, how tall is her house?

- a) 7.7 m                      b) 8.5 m                      c) 9.3 m                      d) 10.1 m                      e) 39.1 m

28. A roof rises 45 cm for every 200 cm of roof. What is the angle of elevation of the roof to the nearest degree?

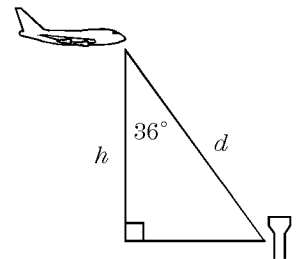
- a)  $5^\circ$                       b)  $13^\circ$                       c)  $60^\circ$                       d)  $77^\circ$                       e)  $200^\circ$



29. A tower is supported by a guy wire 10 m in length. The guy wire meets the ground at an angle of  $50^\circ$ . To the nearest metre, at what height on the tower is the guy wire attached?
- a) 6 m                      b) 7 m                      c) 8 m                      d) 9 m                      e) 10 m

30. Given the plane's height  $h$  is 3200 ft, what is the distance  $d$  to the nearest foot from the plane to the control tower?

- a) 2325 ft                      b) 3955 ft                      c) 4404 ft  
d) 4510 ft                      e) 5444 ft



31. Find the distance between the points (1, 4) and (4, 8).

- a) 2                      b) 3                      c) 4                      d) 5                      e) 6

32. On a graph, point  $A$  is located at (0, 6). Point  $B$  is located 8 units below point  $A$  along the  $y$ -axis and 2 units to the left on a line parallel to the  $x$ -axis. What is the length of  $AB$ ?

- a)  $\sqrt{60}$                       b)  $\sqrt{68}$                       c)  $\sqrt{79}$                       d) 66                      e) 68



37. Find the missing coordinate of the ordered pair  $(1, \underline{\quad})$ , so that the ordered pair is a solution to the equation  $y = 4x - \frac{4}{3}$ .

- a)  $-\frac{4}{3}$       b) 0      c)  $\frac{7}{3}$       d)  $\frac{8}{3}$       e)  $\frac{11}{3}$
- 

38. Find the  $x$ -intercept of the line  $10x - 9y - 24 = 0$ .

- a)  $-\frac{8}{3}$       b)  $-\frac{5}{9}$       c)  $-\frac{1}{10}$       d)  $\frac{11}{9}$       e)  $\frac{12}{5}$
- 

39. Find the equation of the line which passes through point  $(11, -1)$  and with a  $y$ -intercept of 2.

- a)  $y = \frac{11}{3}x + 2$       b)  $y = -\frac{1}{11}x - 2$       c)  $y = -\frac{3}{11}x + 2$   
d)  $y = \frac{1}{5}x - 1$       e)  $y = -\frac{1}{5}x - 8$
- 

40. What is the equation of the line parallel to the  $x$ -axis and four units below it?

- a)  $y = 4$       b)  $x = -4$       c)  $y = -4$       d)  $x = 4$       e)  $x = y$

Math 9    Review #4    Name:    6/12/2013

1.  
Answer:        d  
CodePath:    EAS.CM2.I.A.1

2.  
Answer:        d  
CodePath:    EAS.CM2.I.A.5

3.  
Answer:        c  
CodePath:    EAS.CM2.I.A.9

4.  
Answer:        b  
CodePath:    EAS.CM2.I.A.13

5.  
Answer:        d  
CodePath:    EAS.CM2.I.A.17

6.  
Answer:        b  
CodePath:    EAS.CM2.I.A.29

7.  
Answer:        c  
CodePath:    EAS.CM2.I.A.41

8.  
Answer:        b  
CodePath:    EAS.CM2.I.A.55

9.  
Answer:        c  
CodePath:    EAS.CM2.I.A.75

10.  
Answer:        c  
CodePath:    EAS.CM2.J.A.33

11.  
Answer:        c  
CodePath:    EAS.CM2.J.A.37

12.  
Answer:        b  
CodePath:    EAS.CM2.J.A.49

13.  
Answer:        e  
CodePath:    EAS.CM2.J.A.81

14.  
Answer:        c  
CodePath:    EAS.CM2.J.B.1

15.  
Answer:        c  
CodePath:    EAS.CM2.J.B.5

16.  
Answer:        c  
CodePath:    EAS.CM2.J.B.9

17.  
Answer:        e  
CodePath:    EAS.CM2.J.B.13

18.  
Answer:        b  
CodePath:    EAS.CM2.J.B.17

19.  
Answer:        d  
CodePath:    EAS.CM2.J.B.25

20.  
Answer:        b  
CodePath:    EAS.CM2.J.B.37

21.  
Answer:        b  
CodePath:    EAS.CM2.J.B.45

22.  
Answer:        e  
CodePath:    EAS.CM2.J.B.57

23.  
Answer:        a  
CodePath:    EAS.CM2.J.B.69

24.  
Answer:        b  
CodePath:    EAS.CM2.J.F.3

25.  
Answer:        a  
CodePath:    EAS.CM2.J.F.5

26.  
Answer:        c  
CodePath:    EAS.CM2.J.F.9

27.  
Answer:        d  
CodePath:    EAS.CM2.J.F.19

28.  
Answer: b  
CodePath: EAS.CM2.J.F.36
29.  
Answer: c  
CodePath: EAS.CM2.J.F.53
30.  
Answer: b  
CodePath: EAS.MMA.L.L.12
31.  
Answer: d  
CodePath: EAS.MMA.P.B.1
32.  
Answer: b  
CodePath: EAS.MMA.P.B.9
33.  
Answer: c  
CodePath: EAS.MMA.P.E.1
34.  
Answer: e  
CodePath: EAS.MMA.P.E.7
35.  
Answer: d  
CodePath: EAS.MMA.P.E.9
36.  
Answer: c  
CodePath: EAS.MMA.P.F.1
37.  
Answer: d  
CodePath: EAS.MMA.P.F.10
38.  
Answer: e  
CodePath: EAS.MMA.P.F.13
39.  
Answer: c  
CodePath: EAS.MMA.P.F.23
40.  
Answer: c  
CodePath: EAS.MMA.P.F.29