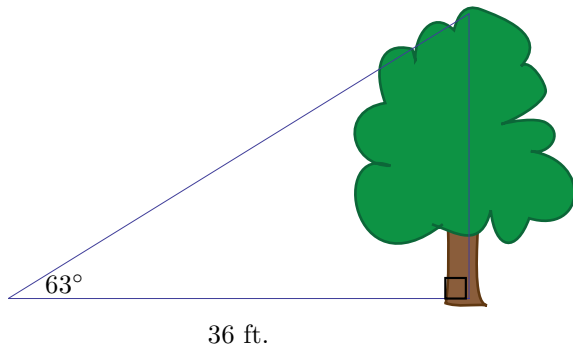


1. Consider



Select the approximate height of the tree:

- A. 67.65 ft
- B. 75.65 ft
- C. 70.65 ft
- D. 74.65 ft
- E. None of These

2. Solve

$$x^3 - 7x^2 + 14x - 8 = 0$$

The solution/s are given by:

- A. $x_1 = 1, x_2 = 2$ and $x_3 = 4$
- B. $x_1 = 2, x_2 = 1$ and $x_3 = 5$
- C. $x_1 = 1, x_2 = 1$ and $x_3 = 5$
- D. $x_1 = 2, x_2 = 1$ and $x_3 = 4$
- E. None of These

3. Solve

$$4^{x-1} = 5$$

- A. $x = 5 \frac{\ln(4)+\ln(5)}{\ln(4)}$ B. $x = \frac{\ln(4)+\ln(5)}{\ln(4)}$ C. $x = 4 + \frac{\ln(4)+\ln(5)}{\ln(4)}$ D. $x = 3 \frac{\ln(4)+\ln(5)}{\ln(4)}$ E. None of These

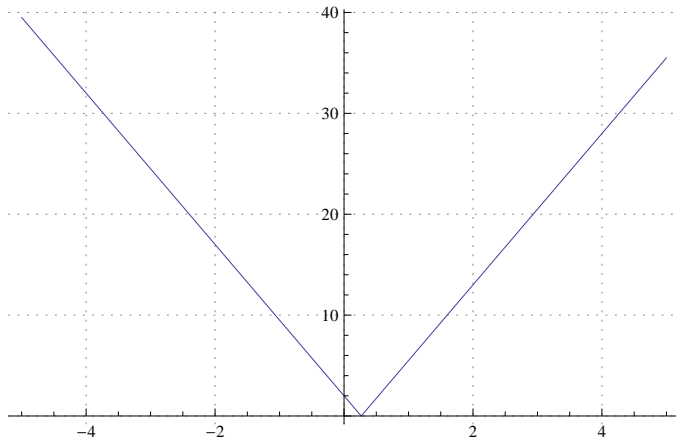
4. Solve

$$7^{x+4} = 11$$

- A. $x = \frac{\ln(11)-4\ln(7)}{\ln(7)}$ B. $x = 11 \frac{\ln(11)-4\ln(7)}{\ln(7)}$ C. $x = 11 \frac{\ln(11)-4\ln(7)}{\ln(7)}$ D. $x = 7 + \frac{\ln(11)-4\ln(7)}{\ln(7)}$ E. None

of These

5. Consider



Select the possible equation/s corresponding to the graph:

- A. $f(x) = \left| 2 - \frac{15x}{2} \right|$
- B. $f(x) = \left| \frac{143}{4} - \frac{15x}{2} \right|$
- C. $f(x) = \left| \frac{9}{2} - \frac{15x}{2} \right|$
- D. $f(x) = \left| -\frac{15x}{2} - \frac{1}{2} \right|$
- E. None of These

6. Solve

$$11^{x-5} = 4$$

- A. $x = \frac{\ln(4)+5\ln(11)}{\ln(11)}$ B. $x = 11 + \frac{\ln(4)+5\ln(11)}{\ln(11)}$ C. $x = 4\frac{\ln(4)+5\ln(11)}{\ln(11)}$ D. $x = 9\frac{\ln(4)+5\ln(11)}{\ln(11)}$ E. None

of These

7. Solve

$$x^3 - 7x + 6 = 0$$

The solution/s are given by:

- A. $x_1 = -3, x_2 = 0$ and $x_3 = 3$
- B. $x_1 = -2, x_2 = 0$ and $x_3 = 2$
- C. $x_1 = -6, x_2 = 0$ and $x_3 = 3$
- D. $x_1 = -3, x_2 = 1$ and $x_3 = 2$
- E. None of These

8. Solve

$$(x - 4)(x + 3) = 1$$

The solution/s are given by:

- A. $x_1 = -3$ and $x_2 = 4$
- B. $x_1 = 12$ and $x_2 = 32$
- C. $x_1 = -7$ and $x_2 = 12$

- D. $x_1 = -3$ and $x_2 = 12$
E. None of These

9. Solve

$$6^{x-1} = 9$$

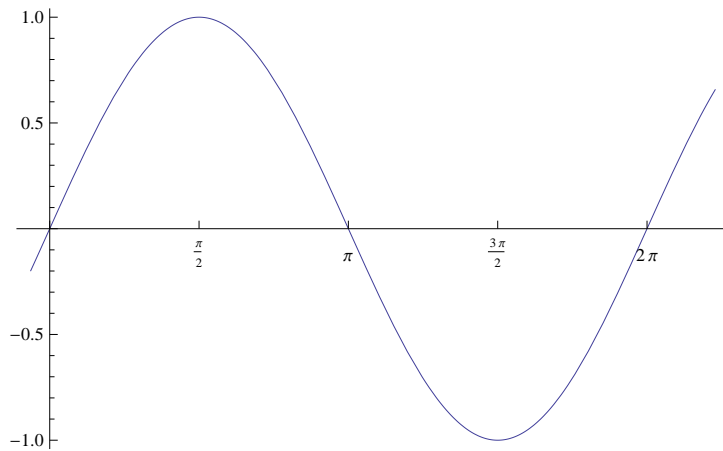
- A. $x = 6 + \frac{\ln(6)+\ln(9)}{\ln(6)}$ B. $x = 6 \frac{\ln(6)+\ln(9)}{\ln(6)}$ C. $x = 9 \frac{\ln(6)+\ln(9)}{\ln(6)}$ D. $x = \frac{\ln(6)+\ln(9)}{\ln(6)}$ E. None of These

10. Solve

$$x - 2 = -7(x - 10)$$

- A. $x = 9$ B. $x = 17$ C. $x = 1$ D. $x = 10$ E. None of These

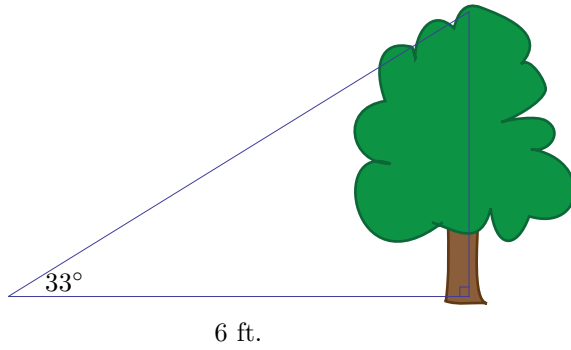
11. Identify the equation corresponding to the graph:



- A. $y = \cot(x)$
B. $y = \sec(x)$
C. $y = \cos(x)$
D. $y = \sin(x)$
E. none of these

12.

Consider



Select the approximate height of the tree:

- A. 3.896 ft
- B. 1.896 ft
- C. 2.896 ft
- D. 1.896 ft
- E. None of These

13. Select: true or false...

$$(\cos 345^\circ + i \sin 345^\circ) \cdot (\cos 475^\circ + i \sin 475^\circ) = (e^{i \cdot 345^\circ}) (e^{i \cdot 475^\circ}) = e^{i \cdot 820^\circ}$$

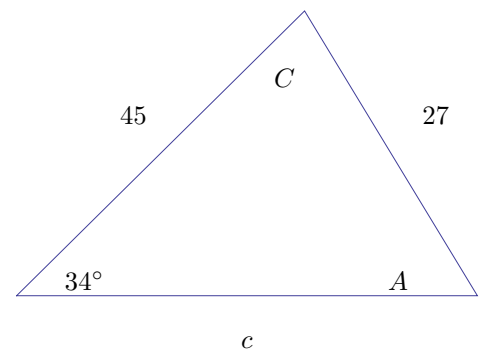
- A. True
- B. False

14. Select: true or false...

$$(\cos 235^\circ + i \sin 235^\circ) \cdot (\cos 160^\circ + i \sin 160^\circ) = (e^{i \cdot 235^\circ}) (e^{i \cdot 160^\circ}) = e^{i \cdot 395^\circ}$$

- A. True
- B. False

15. Consider

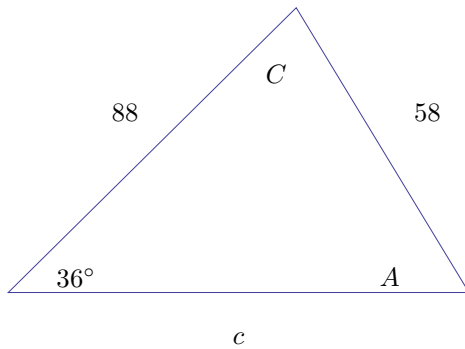


Select the best description of side c :

- A. $c = 52.8205$
- B. $c = 65.1167$

- C. $c = 112.663$ OR $c = 38.316$
- D. $c = 30.4792$
- E. None of These

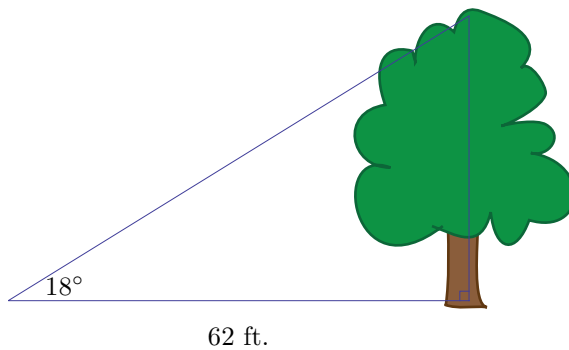
16. Consider



Select the best description of side c :

- A. $c = 44.954$ OR $c = 97.433$
- B. $c = 41.6492$ OR $c = 70.9886$
- C. $c = 42.8728$
- D. $c = 56.3951$
- E. None of These

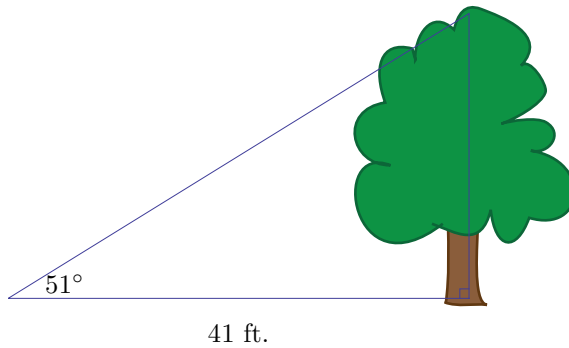
17. Consider



Select the approximate height of the tree:

- A. 20.15 ft
- B. 17.15 ft
- C. 17.15 ft
- D. 17.15 ft
- E. None of These

18. Consider



Select the approximate height of the tree:

- A. 46.63 ft
- B. 44.63 ft
- C. 50.63 ft
- D. 44.63 ft
- E. None of These

19. Determine if the following is an identity or not

$$\cos(2x) = \cos^2(x) - \sin^2(x)$$

- A. Identity
- B. NOT an Identity

20. Find all real solutions to:

$$-\tan(u) = \frac{1}{\sqrt{3}}$$

A.

$$k \in \mathbb{Z} \quad \text{and} \quad u = \pi k + \frac{\pi}{6}$$

B.

$$k \in \mathbb{Z} \quad \text{and} \quad u = \pi k - \frac{\pi}{3}$$



C.

$$k \in \mathbb{Z} \quad \text{and} \quad u = \pi k + \frac{\pi}{6}$$

D. none of these

q1 ='C'; q2 ='A'; q3 ='B'; q4 ='A'; q5 ='A'; q6 ='A'; q7 ='D'; q8 ='E'; q9 ='D'; q10 ='A'; q11 ='D'; q12 ='A'; q13
='A'; q14 ='A'; q15 ='E'; q16 ='A'; q17 ='A'; q18 ='C'; q19 ='A'; q20 ='A';