

Quadratics

1. Identify which of the following are quadratics.

- a) $\frac{1}{2}(x - 2)^2 + 1$ b) $(x - 3)(x + 3)$ c) $4x^2 - 9$ d) all the above e) none of the above

32. Which equation best represents the graph to the right.

- a) $y = (x + 3)^2 + 1$ b) $y = -(x + 4)^2 + 3$ c) $y = (x - 2)^2 - 5$
 d) $y = -(x - 3)^2 + 2$ e) none of them

33. Which of the following is a point on $y = 3x^2$.

- a) (1, 1) b) (1, 3) c) (3, 3) d) $(\frac{1}{3}, \frac{1}{3})$ e) none of the above

34. The following quadratic $y = \frac{1}{2}(x - 5)^2 - 2$ is

- a) opens up and skinny b) opens up and fat c) opens down and skinny
 d) opens up and fat e) none of the above

35. The vertex for $y = -2(x + 5)^2 - 2$ is

- a) (5, 2) b) (-5, -2) c) (-5, -2) d) (5, -2) e) none of the above

36. The equation of the quadratic that is flipped, shifted right 3, down 4, and stretched by 2 is

- a) $y = \frac{1}{2}(x - 3)^2 + 4$ b) $y = \frac{1}{3}(x + 3)^2 + 4$ c) $y = -2(x - 3)^2 - 4$
 d) $y = \frac{1}{2}(x + 3)^2 - 4$ e) $y = 2(x + 3)^2 + 4$

37. The first move to complete the square of $y = -x^2 + 2x - 100$ is

- a) divide everything by 2 b) factor everything by 2
 c) factor only the 'x' terms by 2 d) factor only the 'x' terms by - e) none of them

38. Given the quadratic $x^2 + 18x - 5$, in order to complete the square, one necessary move would be to

- a) add and subtract 6 b) add and subtract 9 c) add and subtract 81
 d) factor out the 6 e) add and subtract the lowest common denominator

39. Given the quadratic $y = x^2 + 6x - 5$, the quadratic in completed square form would be

- a) $y = (x + 3)^2 - 14$ b) $y = (x + 6)^2 - 14$
 c) $y = (x + 1)^2 - 5$ d) $y = (x - 6)^2 - 14$
 e) $y = (x - 3)^2 - 14$

40. Given the quadratic $y = 3x^2 - 2x + 1$, the form of this quadratic is called

- a) completed square form b) factored form c) standard form
 d) linear form e) all the above

Quadratics

Identify which of the following are quadratics.

- a) $\frac{1}{2}(x - 2)^2 + 1$ b) $(x - 3)(x + 3)$ c) $4x^2 - 9$ d) all the above e) none of the above

32. Which equation best represents the graph to the right.

- a) $y = (x + 3)^2 + 1$ b) $y = -(x + 4)^2 + 3$ c) $y = (x - 2)^2 - 5$
 d) $y = -(x - 3)^2 + 2$ e) none of them

33. Which of the following is a point on $y = 3x^2$.

- a) $(1, 1)$ b) $(1, 3)$ c) $(3, 3)$ d) $(\frac{1}{3}, \frac{1}{3})$ e) none of the above

34. The following quadratic $y = \frac{1}{2}(x - 5)^2 - 2$ is

- a) opens up and skinny b) opens up and fat c) opens down and skinny
 d) opens up and fat e) none of the above

35. The vertex for $y = -2(x + 5)^2 - 2$ is

- a) $(5, 2)$ b) $(-5, -2)$ c) $(-5, -2)$ d) $(5, -2)$ e) none of the above

36. The equation of the quadratic that is flipped, shifted right 3, down 4, and stretched by 2 is

- a) $y = \frac{1}{2}(x - 3)^2 + 4$ b) $y = \frac{1}{3}(x + 3)^2 + 4$ c) $y = -2(x - 3)^2 - 4$
 d) $y = \frac{1}{2}(x + 3)^2 - 4$ e) $y = 2(x + 3)^2 + 4$

The first move to complete the square of $y = -x^2 + 2x - 100$ is

- a) divide everything by 2 b) factor everything by 2
 c) factor only the 'x' terms by 2 d) factor only the 'x' terms by - e) none of them

38. Given the quadratic $x^2 + 18x - 5$, in order to complete the square, one necessary move would be to

- a) add and subtract 6 b) add and subtract 9 c) add and subtract 81
 d) factor out the 6 e) add and subtract the lowest common denominator

39. Given the quadratic $y = x^2 + 6x - 5$, the quadratic in completed square form would be

- a) $y = (x + 3)^2 - 14$ b) $y = (x + 6)^2 - 14$
 c) $y = (x + 1)^2 - 5$ d) $y = (x - 6)^2 - 14$
 e) $y = (x - 3)^2 - 14$

40. Given the quadratic $y = 3x^2 - 2x + 1$, the form of this quadratic is called

- a) completed square form b) factored form c) standard form
 d) linear form e) all the above

12. The value of $\sin 45.6^\circ$ to four decimal places is

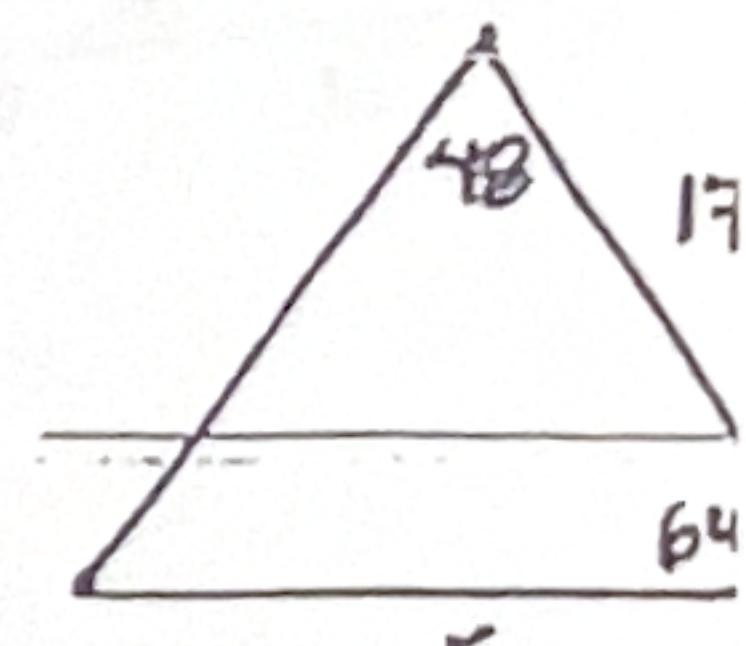
- a) -0.7149 b) 0.7149 c) 0.5000 d) -0.5000 e) none of the above

13. The measure of $\sin A = \frac{7}{8}$ where A is an angle less than 90°

- a) 18.36 b) 61.0 c) .01527 d) 0.23 e) none for the above

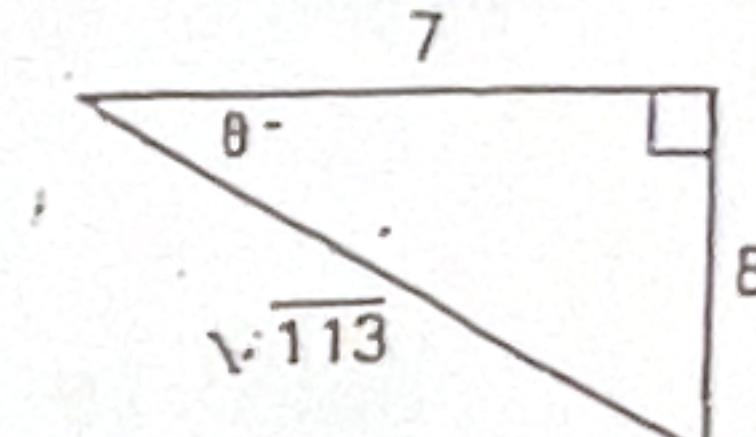
14. For the diagram to the right, to find x , I would use

- a) sin law b) cos law c) sohcahtoa d) ASTT e) both c and d



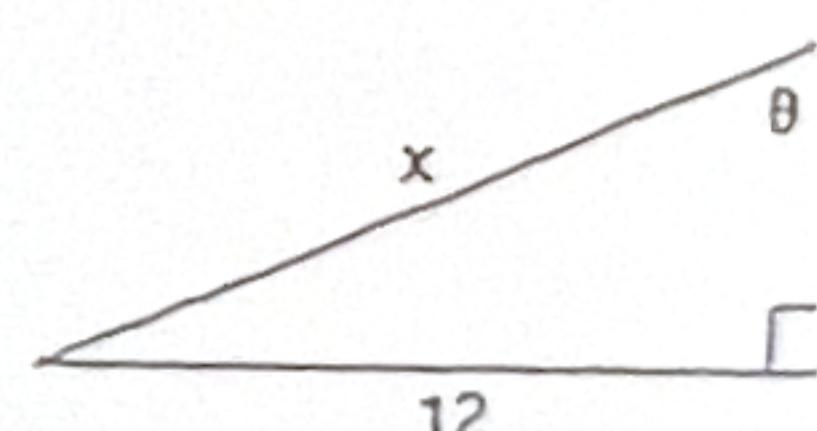
15. For the diagram to the right, $\tan \theta$ equals

- a) 8 b) $\frac{7}{8}$ c) $\frac{8}{7}$ d) $\frac{8}{\sqrt{113}}$ e) $\frac{7}{\sqrt{113}}$



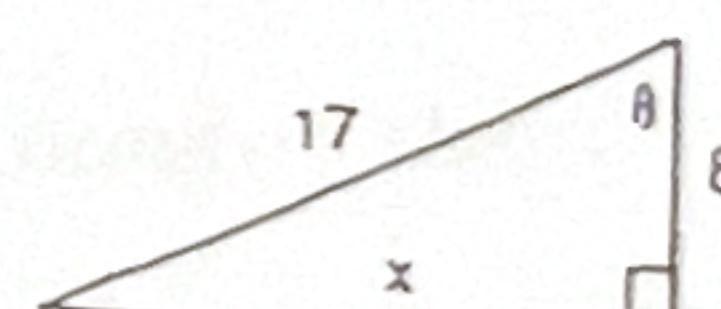
16. For the diagram to the right, if θ equals 67.4° , the value of x is almost

- a) 13 b) 24.6 c) 26.4 d) 12 e) none of the above



17. For the diagram to the right, the value of $\sin \theta$ is

- a) $\frac{x}{8}$ b) 15 c) $\frac{15}{8}$ d) $\frac{8}{15}$ e) $\frac{15}{17}$



18. If $\sin \theta = \frac{3}{5}$, the value of $\cos \theta$ is

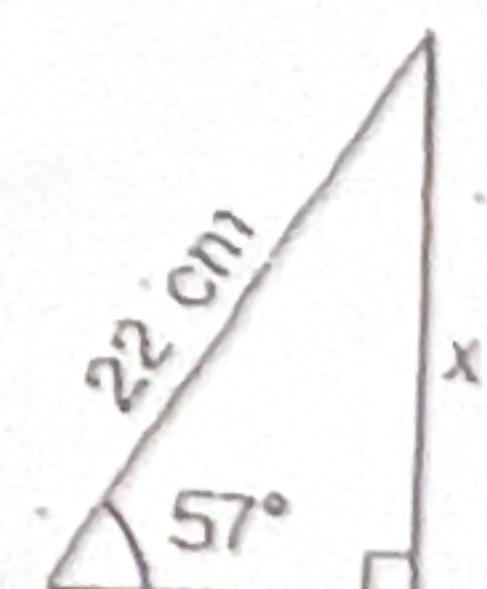
- a) $\frac{5}{3}$ b) .9999 c) $\frac{4}{5}$ d) $\frac{16}{5}$ e) none of the above

19. If a ladder 8.2m long is placed its foot 5.6m away from the wall, how high up the wall does the ladder reach.

- a) 10m b) 8m c) 6m d) 1.8m e) none of the above

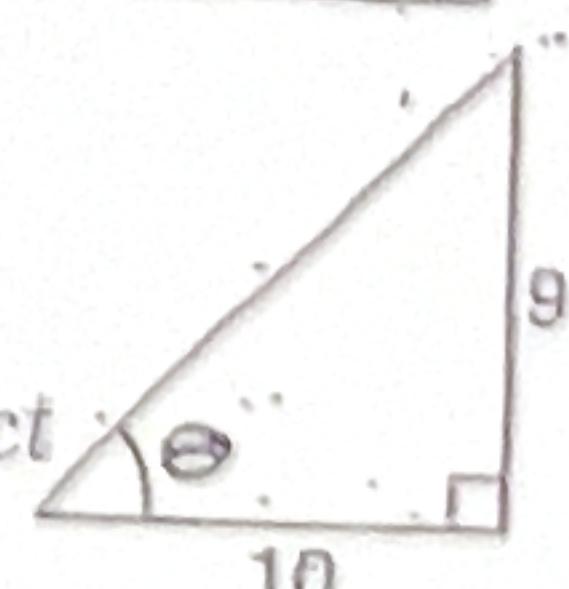
20. For the diagram to the right, the value of x equals

- a) 11.98 b) 18.45 c) 12.54 d) 33.88 e) none of the above



21. For the diagram to the right, the value of θ equals

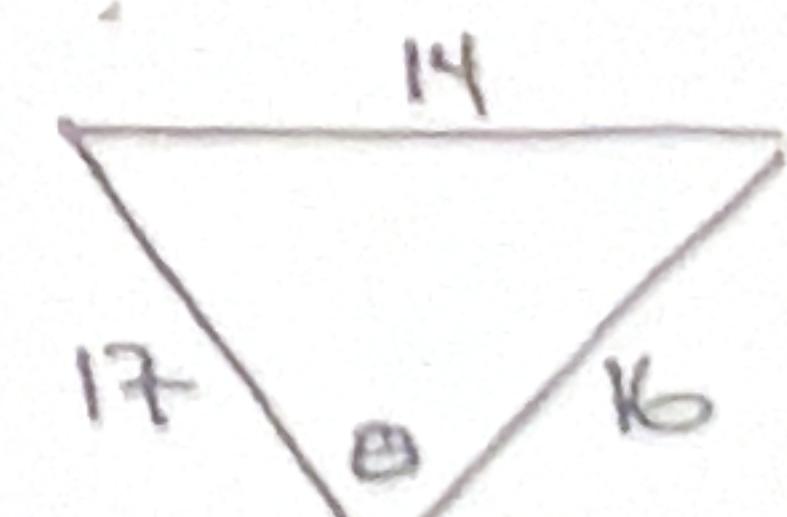
- a) 8 b) 41.98 c) 48.01 d) 64.16 e) none of the above



22. Hey, its time for a free mark, Circle the one (e), that you think is correct

23. For the diagram to the right, the value of θ is

- a) 50.1° b) 46.7° c) 47.6° d) 1.05° e) none of the above



24. For the diagram to the right, the value of x is

- a) 40.96 b) 6.4 c) 16.27 d) 265 e) none of the above

