

⑩ Solve for X

$$x^2 - x + 6 = 0$$

The solution is $x = \underline{\hspace{2cm}}$

⑪

$$x^2 + \frac{13}{2}x = 13$$

What is the solution?

$x = \underline{\hspace{2cm}}$

⑫ Give exact and approximate solutions to three decimal places

$$y^2 - 2y + 1 = 81$$

What are the exact solutions

$y = \underline{\hspace{2cm}}$

13 Solve the formula for the given letter.
Assume all variables represent non-negative numbers.

$$E = mc^2, \text{ for } c$$

Choose

A $c = -\sqrt{\frac{E}{3m}}$

B $c = \frac{E}{m}$

C $c = \sqrt{\frac{E}{m}}$

D = not given

14 Find the vertex, line of symmetry and maximum or minimum value

$$f(x) = (x+4)^2 - 3$$

The vertex is _____

(Type an ordered pair)

The minimum value is $f(x) =$ _____

15

Determine the nature of the solutions of the equation

$$y^2 = \frac{2}{5}y + \frac{2}{5}$$

Choose

- A the equation has one real solution
- B the equation has two real solutions
- C the equation has two non-real solutions

16

The width of a rectangle is 3 ft less than the length. The area is 34 ft^2 .
Find the length and the width

The width is _____

The length is _____

17

Find and label the vertex and the line of symmetry

$$f(x) = \frac{1}{4}x^2$$

The vertex is _____
(TYPE an ordered pair)

The equation of the line of symmetry is

$$x = \underline{\hspace{2cm}}$$

18

A student opens a mathematics book to two facing pages.

The product of the page numbers is 272. Find the page number

The first page is _____

The second page is _____

19

find and label the vertex and
the line of symmetry.

$$f(x) = -3(x+3)^2$$

The vertex is _____
(type an ordered pair)

The equation of the line of
symmetry is

$$x = \underline{\hspace{2cm}}$$

20 Determine the nature of solutions
of the equation

$$x^2 - 20x + 100 = 0$$

What does the equation have?

- A two non-real solutions
- B two real solutions
- C one real solution

21

Find the x- and y-intercepts

$$f(x) = 4x^2 + 4x + 1$$

The y-intercept is _____

(Type an ordered pair)

The x-intercept is _____

(Type an ordered pair)

22

a) Solve $3x^2 - 7x - 13 = 0$.

b) Find the x-intercepts of

$$f(x) = 3x^2 - 7x - 13$$

a) What are the solutions

$x =$
(Simplify your answer)

b) What are the x-intercepts?

— Type ordered pair

Q3

Give exact and approximate solutions
to three decimal places

$$(x+4)^2 = 25$$

What are the exact solutions?

$$x = \underline{\hspace{2cm}}$$

(Type an exact Answer)
using Radicals as
needed