1. Rewrite the following in simplified radical form.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fprqw%3D76%7B%3Fpvs%3D7%3F%2Cpvs%3D%3F%2Cprqw%3D

Assume that all variables represent positive real numbers

1. Write the following expression in simplified radical form.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fprqw%3D17%23%7B%3Fpvs%3D0%3F%2Cpvs%3D%23y%3Fpvs%3D%3B%3F%2Cpvs%3D%3F%2Cprqw%3D

Assume that all variables represent positive real numbers.

1. Simplify the following expression as much as possible:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?7z%3Fprqw%3D1y%3Fpvs%3D6%3F%2Cpvs%3D%3F%2Cprqw%3D%23%2E%23y%3Fpvs%3D1%3F%2Cpvs%3D%3Fprqw%3D%3Byz%3Fpvs%3D1%3F%2Cpvs%3D%3F%2Cprqw%3D

Assume that all variables represent positive real numbers.

4.

Simplify.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fprqw%3D6%23v%23t%3Fpvs%3D1%3F%2Cpvs%3D%3F%2Cprqw%3D%23%3Fprqw%3D23%23v%3Fpvs%3D6%3F%2Cpvs%3D%23t%3F%2Cprqw%3D

Assume that all variables represent positive real numbers.

5.

Multiply. Simplify your answer as much as possible.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%2B5%3Fprqw%3D6%3F%2Cprqw%3D%23%2E%231%3Fprqw%3D23%3F%2Cprqw%3D%2A%23%2B%3B%3Fprqw%3D6%3F%2Cprqw%3D%23%28%235%3Fprqw%3D23%3F%2Cprqw%3D%2A

6.

Rationalize the denominator and simplify:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fal%7B%3D%3Fprqw%3D11%3F%2Cprqw%3D%3Flufq%3D%3Fprqw%3D00%3F%2Cprqw%3D%3F%2Cal%7B%3D

7.

Write in simplified radical form by rationalizing the denominator.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fal%7B%3D%3Fprqw%3D23%3F%2Cprqw%3D%23%2E%235%3Flufq%3D%2E6%23%3Fprqw%3D23%3F%2Cprqw%3D%23%28%234%3F%2Cal%7B%3D

8.

Solve for http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?y:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fprqw%3Dy%23%28%2320%3F%2Cprqw%3D%23%3E%230 ,

where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?yis a real number.  
(If there is more than one solution, separate them with commas.)

9.

Solve the following equation for http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?y:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%09%3Fprqw%3D5y%23%2E%232%3F%2Cprqw%3D%23%3E%23%3Fprqw%3D%3Ay%23%2E%2325%3F%2Cprqw%3D%09,

where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?yis a real number.  
(If there is more than one solution, separate them with commas.)

10.

Solve for http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?z:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fprqw%3D1z%23%28%23%3B%3F%2Cprqw%3D%23%3E%23z ,

where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?zis a real number.  
(If there is more than one solution, separate them with commas.)

11.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  | | --- | | For the following right triangle, find the side length http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7B . Round your answer to the nearest tenth. | | |  |  | | --- | --- | | |  | | --- | |  | | |

|  |
| --- |
|  |

|  |
| --- |
|  |

12.

Compute the following:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fal%7B%3D%3Fqllw%3D0%3Fle%3D216%3F%2Cqllw%3D%3F%2Cal%7B%3D.

13.

Write the following expression in simplified radical form.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fal%7B%3D%3Fqllw%3D7%3Fle%3D01%3F%2Cqllw%3D%3F%2Cal%7B%3D

14.

Write the following expression in simplified radical form.

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%3Fal%7B%3D%3Fqllw%3D0%3Fle%3D73%7B%3Fpvs%3D21%3F%2Cpvs%3Dy%3Fpvs%3D6%3F%2Cpvs%3D%3F%2Cqllw%3D%3F%2Cal%7B%3D

Assume that all of the variables in the expression represent positive real numbers.

15.

Find the roots of the quadratic equation:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?y%3Fpvs%3D1%3F%2Cpvs%3D%23%28%23%3Ay%23%28%2327%23%3E%233 .

(If there is more than one root, separate them with commas.)

16.

Solve:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?7%23y%3Fpvs%3D1%3F%2Cpvs%3D%3E%2E%3B%23y%23%28%236 .

(If there is more than one solution, separate them with commas.)

17.

Solve the equation

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%0E%09%2Bw%23%28%230%2A%3Fpvs%3D1%3F%2Cpvs%3D%0E%09%3E%23%0E%091w%3Fpvs%3D1%3F%2Cpvs%3D%23%2E%230w%23%28%231%3A%0E%09

for http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?w .

(If there is more than one solution, separate them with commas.)

18.

Solve http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7B%3Fpvs%3D1%3F%2Cpvs%3D%23%3E%2376 , where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7Bis a real number.  
Simplify your answer as much as possible.

(If there is more than one solution, separate them with commas.)

19.

Solve http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%2B%7B%23%2E%23%3B%2A%3Fpvs%3D1%3F%2Cpvs%3D%23%2E%2316%23%3E%233where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7Bis a real number.   
Simplify your answer as much as possible.

(If there is more than one solution, separate them with commas.)

20.

Compute the value of the discriminant and give the number of real solutions to the quadratic equation

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?0%7B%3Fpvs%3D1%3F%2Cpvs%3D%23%28%236%7B%23%2E%230%23%3E%233

21.

Solve the following equation for http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7Bby using the quadratic formula:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?5%7B%3Fpvs%3D1%3F%2Cpvs%3D%23%2E%23%3B%7B%23%28%232%23%3E%233 .

(If there is more than one solution, separate them with commas.)

22.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | |  |  | | --- | --- | | |  | | --- | |  | |   When a ball is thrown, its height in feet http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?kafter http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?wseconds is given by the equation  http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?k%23%3E%23u%23w%23%2E%2325%23w%3Fpvs%3D1%3F%2Cpvs%3D ,  where http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?uis the initial upwards velocity in feet per second. If http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?u%23%3E%232%3Afeet per second, find all values of http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?wfor which http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?k%23%3E%236feet. Do not round any intermediate steps. Round your answer to http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?1decimal places.  (If there is more than one answer, enter additional answers with the button that says "or".) | | |  |  | | --- | --- | | |  | | --- | |  | | |

|  |  |  |
| --- | --- | --- |
| |  | | --- | |  | | http://www.phoenix.aleks.com/aleks/gif/student/baseball.gif |

23.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Graph the parabola:  http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?z%3E%3Fal%7B%3D%2B%3Fofew%3D%7B%23%2E%232%3Fqjdkw%3D%2A%3F%2Cal%7B%3D%3Fpvs%3D1%3F%2Cpvs%3D%23%28%230 .  To graph the parabola, plot the vertex and four additional points, two on each side of the vertex, and then click on the graph icon.   |  | | --- | |  | |  | | | |  |  | | --- | --- | | |  | | --- | |  | | |

|  |
| --- |
|  |

|  |
| --- |
|  |

24.

Graph the parabola:

http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?z%23%3E%23%3Fal%7B%3D0%3Flufq%3D1%3F%2Cal%7B%3D%23%7B%3Fpvs%3D1%3F%2Cpvs%3D%23%2E%23%3A%23%7B%23%28%23%3Fal%7B%3D2%3A%3Flufq%3D1%3F%2Cal%7B%3D .

To graph the parabola, plot the vertex and four additional points, two on each side of the vertex, and then click on the graph icon.

|  |  |
| --- | --- |
|  |  |

|  |
| --- |
|  |

|  |
| --- |
|  |

.

|  |  |  |
| --- | --- | --- |
| |  |  | | --- | --- | | |  | | --- | |  |   25.  Find the http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7B-intercept(s) and the coordinates of the vertex for the parabola http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?z%23%3E%23%7B%3Fpvs%3D1%3F%2Cpvs%3D%2E5%7B%2E4 . If there is more than one http://www.phoenix.aleks.com/alekscgi/x/math2htgif.exe/M?%7B-intercept, separate them with commas. | |