

Warm up #1

Simplifying Radicals

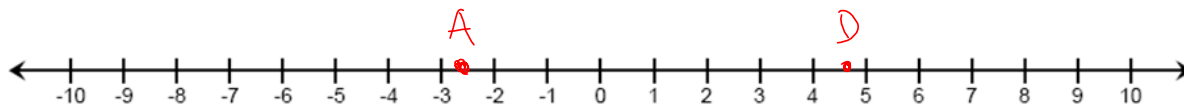
Write each expression in simplest radical form.

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

<p>1. <math>\sqrt{72}</math></p> <p><math>6\sqrt{2}</math></p> <p><math>\begin{array}{r} 72 \\ 1 \diagdown \\ 36 \end{array} 2</math></p>	<p>2. <math>2\sqrt{726}</math></p> <p><math>22\sqrt{6}</math></p> <p><math>\begin{array}{r} 726 \\ 1 \diagdown \\ 6 \cdot 121 \end{array}</math></p>
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Graph each with a point on the number line. Write R=rational or I=irrational in the blank below each.



3. A at  $-2\frac{11}{15}$

R

4. D at  $\sqrt{24} = 4.89$

I

$$\sqrt{24}$$

$$2\sqrt{6}$$

-2.73

$$\frac{-41}{15}$$

Algebra 1- WH  
Warm up Simplifying Radicals #2

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

1. Given the expression:

$$3\sqrt{71x}$$

What value of  $x$  makes the expression equivalent to  $24\sqrt{71}$ ?

$$3\sqrt{71x}$$

*(Handwritten: A red arrow points from the 'x' to the '8' in the denominator below, indicating a relationship or simplification step.)*

$$x = 8.8$$

$$x = 67$$

$$3 \cdot 8\sqrt{71}$$

$$24\sqrt{71}$$

2.

$$\sqrt{91x}$$

For which value of  $x$  should the expression be further simplified?

b.  $x = 259$

d.  $x = 53$

b.  ~~$x = 74$~~

d.  ~~$x = 2$~~

$$\sqrt{91x}$$

$$\sqrt{13 \cdot 7 \cdot 259}$$

$$\sqrt{13 \cdot 7 \cdot 37.7}$$

Algebra 1- WH  
Warm up Simplifying Radicals #2

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

1. Given the expression:

$$3\sqrt{71x}$$

What value of  $x$  makes the expression equivalent to  $24\sqrt{71}$ ?

2.

$$\sqrt{91x}$$

For which value of  $x$  should the expression be further simplified?

$$\sqrt{13 \cdot 7 \cdot x}$$

What are possible values of  $x$ ?

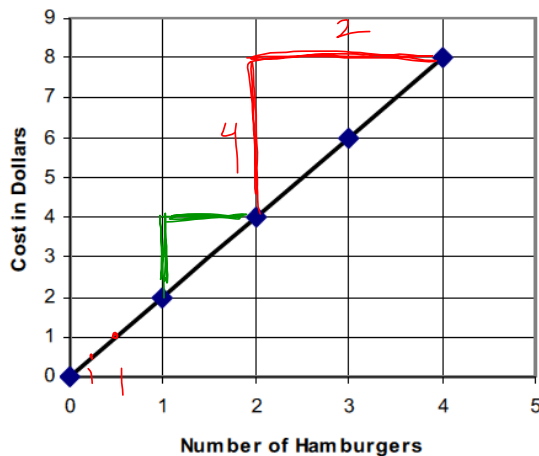
$$\begin{aligned} 26 &= 13 \cdot 2 \\ 14 &= 7 \cdot 2 \\ 28 &= 7 \cdot 4 \\ 77 &= 7 \cdot 11 \\ 4 & \end{aligned}$$

NAME \_\_\_\_\_

### Meaning of Slope Rate of Change in Graphs Student Worksheet

1)

Hamburger Heaven



$$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{y}{x} \quad \frac{4}{2} = 2$$

- a) What is indicated by the fact that the line is going up from left to right?

The more burgers I buy, the more it costs.

- b) According to the graph, what is the slope (rate of change) of the line? Be sure to include your units.

$$\frac{2 \text{ dollars}}{1 \text{ burger}}$$

- c) What is the meaning of the slope in this situation?

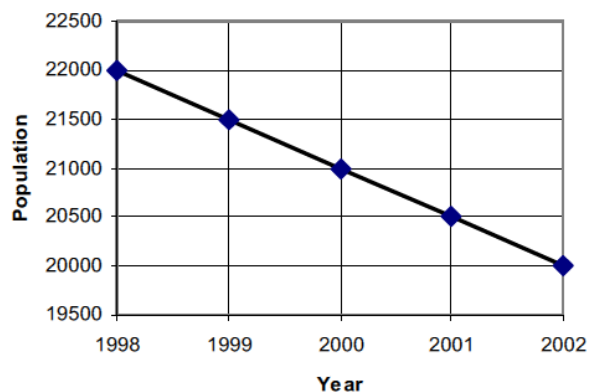
Each burger costs \$2

- d) Should the points in this example be connected by a line? Explain.

no, because it is not possible to purchase a fraction of a burger.

2)

Smallville Population



- a) What is the unit length on the x-axis? What is the unit length on the y-axis?

- b) What is the slope (rate of change) of the graphed line? Be sure to include units.

- c) What does the fact that the line is going down indicate? How is this shown in the slope?

- d) What is the meaning of the slope in this situation?

