

NAME: _____
7th GRADE

Simplify the radicals.

1) $\sqrt{63}$

2) $\sqrt{40}$

3) $\sqrt{20}$

4) $\sqrt{81}$

5) $\sqrt{12}$

6) $\sqrt{8}$

7) $\sqrt{10}$

8) $\sqrt{44}$

Solve!

$$1) -3(4x-2) = 2$$

$$2) -4x - 9x + 4 = -11$$

$$3) -9x - 3 = 5x + 7$$

$$4) 2x + 4x + 7 = 2(3x + 1)$$

$$5) \frac{2}{3}(9x + 12) = 0$$

$$6) \frac{5}{4}(4x - 8) = -2$$

M-STEP PRACTICE QUESTIONS

1) Enter the value of n so the expression $(-y + 5.3) + (7.2y - 9)$ is equivalent to $6.2y + n$.

2) This table shows a proportional relationship between x and y .

x	y
4	48
5	60
8	96

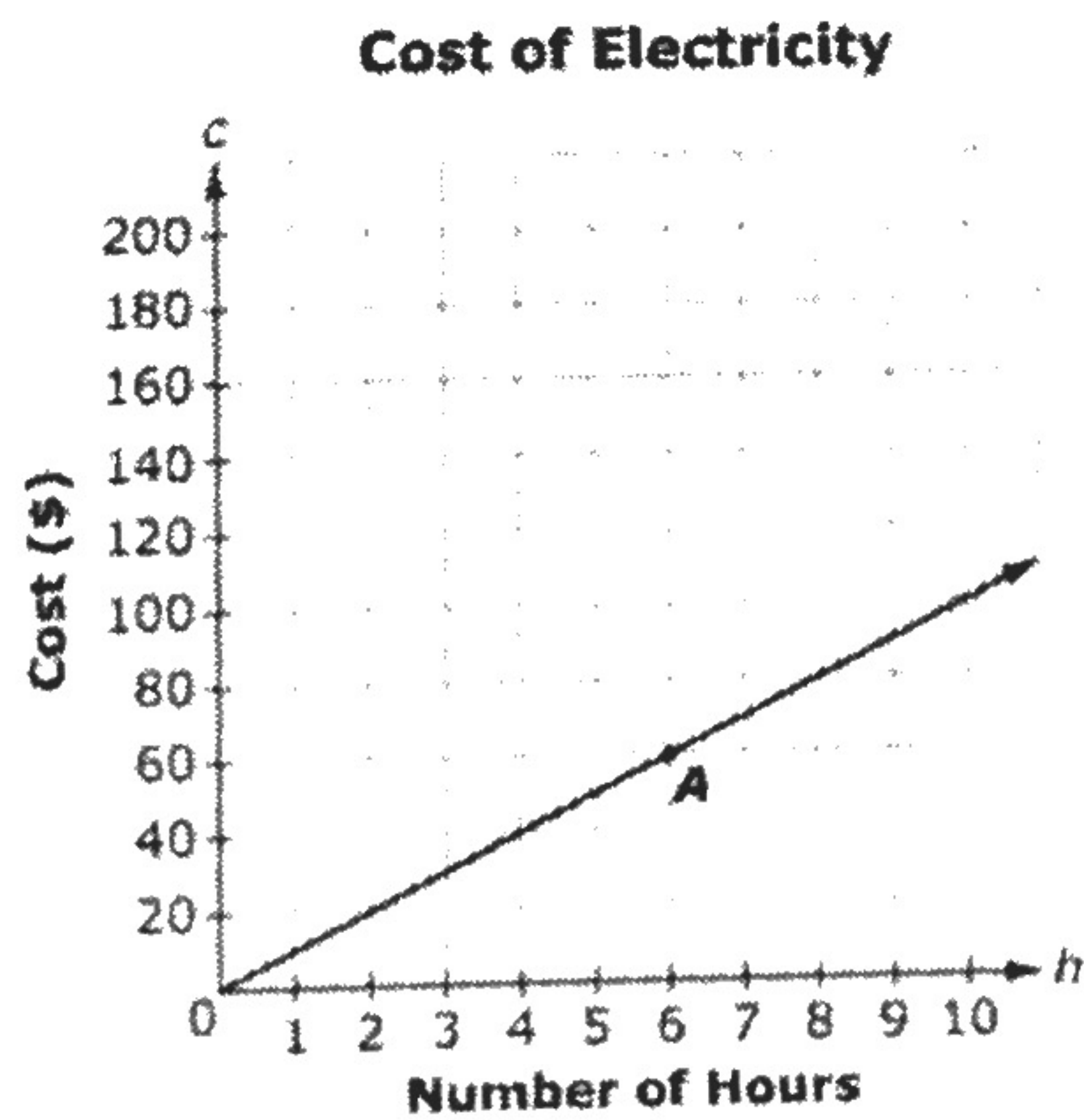
Find the constant of proportionality (r).

Using the value for r , enter an equation in the form of $y = rx$.

3) Dave buys a baseball for \$15 plus an 8% tax. Mel buys a football for \$20 plus an 8% tax.

Enter the difference, in dollars, of the amounts Dave and Mel pay, including tax. Round your answer to the nearest cent.

4) This graph shows a proportional relationship between the number of hours (h) a business operates and the total cost (c) of electricity.



Select True or False for each statement about the graph.

	True	False
Point A represents the total cost of electricity when operating the business for 6 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$8 when operating the business for 80 hours.	<input type="checkbox"/>	<input type="checkbox"/>
The total cost of electricity is \$10 when operating the business for 1 hour.	<input type="checkbox"/>	<input type="checkbox"/>

- 5) Determine whether each statement is true for all cases, true for some cases, or not true for any case.

	True for all cases	True for some cases	Not true for any cases
Two vertical angles form a linear pair.			
If two angles are supplementary and congruent, they are right angles.			
The sum of two adjacent angles is 90° .			
The measure of an exterior angle of a triangle is greater than every interior angle of the triangle.		<input type="checkbox"/>	

- 6) The entry fee to the fair is \$4.00. Each ride requires a ticket that costs \$0.50. Heidi spent a total of \$12.00.

How many tickets did Heidi purchase?

- (a) 6
 (b) 16
 (c) 24
 (d) 32

- 7) Shelly incorrectly solves the equation $\frac{1}{2}(c + 6) = 7$. Her work is shown.

Part A:

Select all the steps that show an error based on the equation in the previous step.

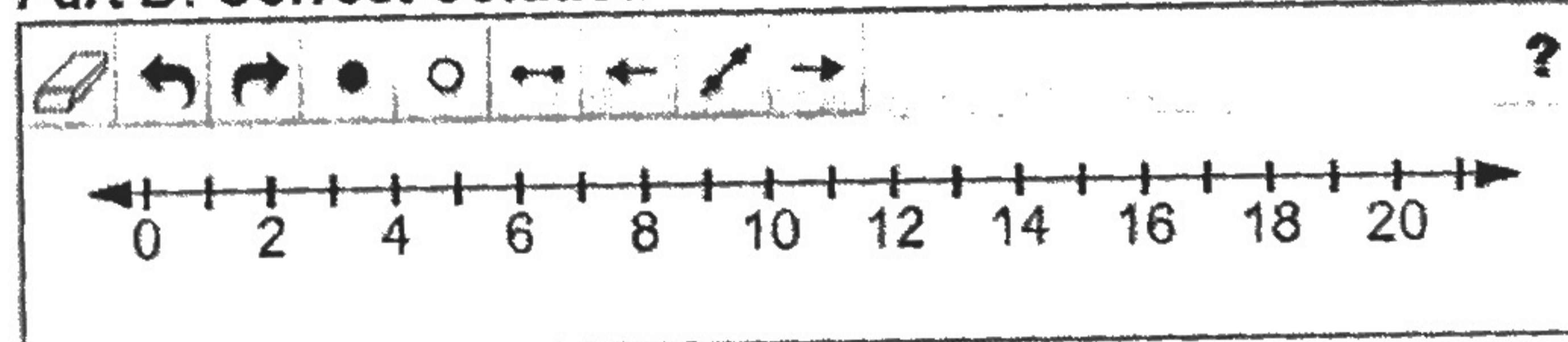
Part B:

Use the number line to show the correct solution of the given equation.

Part A:

	$\frac{1}{2}(c + 6) = 7$
Step 1:	$\frac{1}{2}c + 6 = 7$
Step 2:	$\frac{1}{2}c = 7 + 6$
Step 3:	$\frac{1}{2}c = 13$
Step 4:	$c = 13 \div 2$
Step 5:	$c = 6\frac{1}{2}$

Part B: Correct Solution



- 8) David uses $\frac{1}{2}$ cup of apple juice for every $\frac{1}{4}$ cup of cranberry juice to make a fruit drink.

Enter the number of cups of apple juice David uses for 1 cup of cranberry juice.