Name _____ Date _____

Proportional Relationships in Tables and Equations: Proportional or Not?

Directions: Answer each question. When you type an answer, use digits and a decimal point only.

Pay for hours worked

Hours worked	Pay (dollars)
3	39
5	65
8	104
10	130

1. The table shows a worker's pay for different numbers of hours. Is pay proportional to hours worked? Choose the answer with the correct reason.

A. No. Pay does not go up by the same amount from one row to the next.

B. No. The table does not include 0 hours.

C. Yes. Pay goes up by the same amount from one row to the next.

D. Yes. Pay ÷ hours is 13 in every row.

Gas used and distance driven on a road trip

Gas used (gallons)	Distance driven (miles)
4	112
9	?
12	336

2. The table shows gas used and distance driven on a road trip. What number belongs in place of the ? so that distance driven is proportional to gas used?

_____ miles

Flour and muffins for four batch sizes

Flour (cups)	Muffins
2	12
3	18
5	30
8	50

3. One row of the table keeps muffins from being proportional to cups of flour. How many muffins should that row show for the relationship to be proportional?

_____ muffins

4. At a bowling alley, the cost C, in dollars, for a party of p players is $C = 8p + 6$. Which statement about the cost is true?

A. Cost is not proportional to players, because cost ÷ players changes as p changes.

B. Cost is proportional to players, because the cost goes up $8 for each player.

C. Cost is proportional to players, with a constant of proportionality of 8.

D. Cost is not proportional to players, because the cost goes up by a different amount for each player.

5. Which equations show y proportional to x? Select the 2 that apply.

☐ A. $y = 6x$ ☐ B. $y = 6x + 1$ ☐ C. $y = 2x - 2$

☐ D. $y = x + 6$ ☐ E. $y = 0.5x$

Monthly cost of three phone plans

Minutes used	Plan A cost (dollars)	Plan B cost (dollars)	Plan C cost (dollars)
100	13	10	12
200	21	10	24
300	29	10	36

6. The table shows the monthly cost of three phone plans for different numbers of minutes. Only one plan's cost is proportional to the minutes used. What is that plan's cost per minute, in dollars?

_____ dollars per minute

Owen's total savings

Week	Total saved (dollars)
1	35
2	55
3	75
4	95

7. In the table, Owen's total saved is not proportional to the number of weeks. Which change to every total would make total saved proportional to weeks?

A. Subtract 15 from every total.

B. Add 15 to every total.

C. Subtract 20 from every total.

D. Divide every total by 5.

Cost of concert tickets

Tickets	Cost (dollars)
2	18
5	45
7	56

8. Ava used the table to decide whether cost is proportional to the number of tickets. Her work is shown.

1. $18 \div 2 = 9$
2. $45 \div 5 = 9$
3. $56 \div 7 = 8$
4. Two of the three ratios are 9, so cost is proportional to the number of tickets.

Which step has the first mistake?

A. $56 \div 7 = 8$

B. There is no mistake.

C. Two of the three ratios are 9, so cost is proportional to the number of tickets.

D. $18 \div 2 = 9$

E. $45 \div 5 = 9$