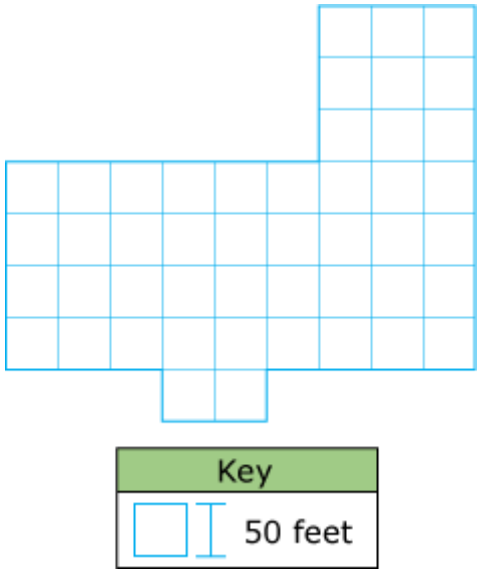
ELM_7th_Unit3_Pre [25759]

Student

Class

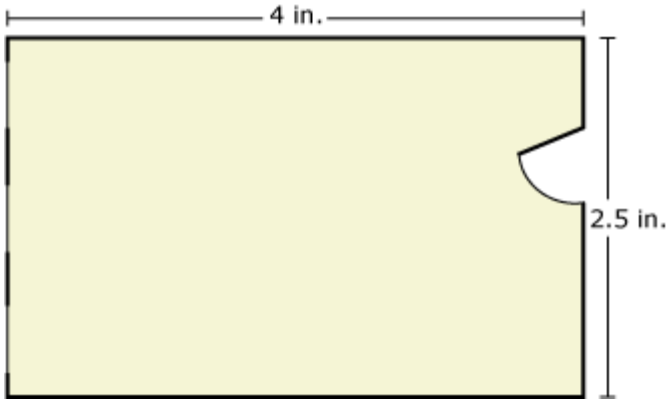
Date

1. Mary works for an office moving company. She used congruent squares to make the floor plan for part of a one-story office building, as shown below.



Based on the key shown, what is the area in square feet of the floor plan?

2. Mr. Curtis made the scale drawing of his math classroom shown below.



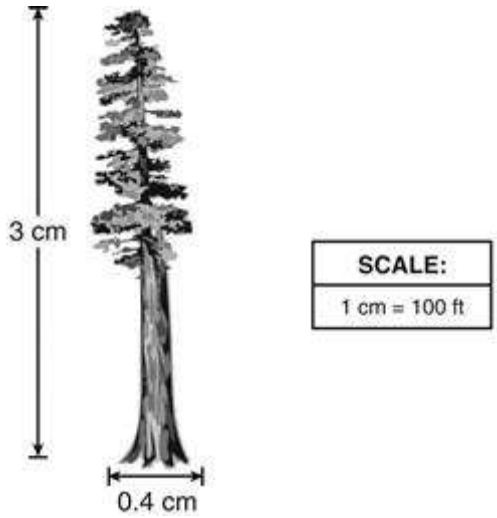
The actual classroom measures 32 feet by 20 feet.

Part A. What length in feet does 1 inch in the drawing represent? Show or explain how you got

your answer.

Part B. How many inches in the drawing does it take to represent 1 foot? Show or explain how you got your answer.

3. **While on a camping trip, James made a sketch of a sequoia tree. He used a scale of** $1\,\text{cm} = 100\,\text{ft}$.



If the width of the trunk of the tree was 0.4 centimeter on James's sketch, what is the actual width of the tree, in feet?

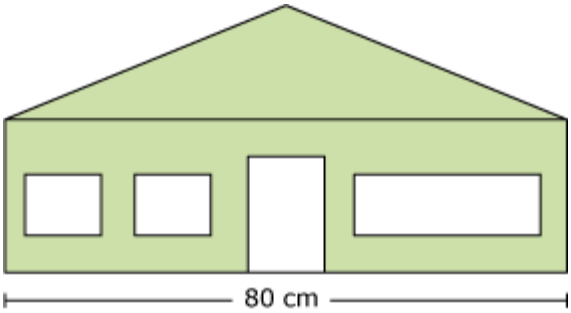
A. 25

B. 40

C. 250

D. 400

4. Rona made a scale drawing of the front of her house as shown below. The length of her drawing is given in centimeters (cm).



The actual length of the front of her house is 40 feet.

Part A. What length in centimeters did Rona use in her drawing to represent 1 foot? Show or explain how you got your answer.

Part B. How many feet are represented by 1 centimeter in Rona's drawing? Show or explain how you got your answer.

5. Paula lives 0.8 mile from her school.

Part A. What is the distance in yards that she lives from school? Show or explain how you got your answer.

Part B. What is the distance in feet that she lives from school? Show or explain how you got your answer.

6. Brenda completed $\frac{1}{2}$ of a crossword puzzle in $\frac{1}{4}$ of an hour. If she continues at this same rate, which problem shows the number of crossword puzzles she could complete in one hour?

A. $2 \cdot 4$

B. $\frac{1}{2} \cdot 4$

C. $\frac{1}{4} \cdot 2$

D. $\frac{1}{4} \cdot \frac{1}{2}$

7. Craig compared the costs of four different brands of bottled olive oil. The cost and amount of oil in each bottle are shown in the table.

Brands of Olive Oil

Bottle Brand	Cost (in dollars)	Amount of Oil (in ounces)
W	8.75	10
X	9.95	8.5
Y	18.25	25
Z	19.48	13.5

Which brand has the lowest cost per ounce of oil?

A. *W*

B. *X*

C. *Y*

D. *Z*

8. Camille asked the managers of two different companies what they would charge for repair work at her house. The amount each company charges is shown below.

Company 1: $45 per hour plus a $35 service fee

Company 2: $40 per hour plus a $60 service fee

For what number of hours would the charges be the same for both companies?

A. 1

B. 5

C. 12

D. 19

9. A library charges a fine of 5 cents per day for each book that is returned late. Reggie created a table to display this proportion, but one fine in his table is incorrect.

Library Fines

Number of Days a Book is Returned Late	Fine (in cents)
3	15
6	30
11	45
12	60

Which fine in the chart is incorrect based on the proportion the library uses?

A. 15 cents for 3 days late, since $\frac{15}{3} \neq \frac{1}{5}$

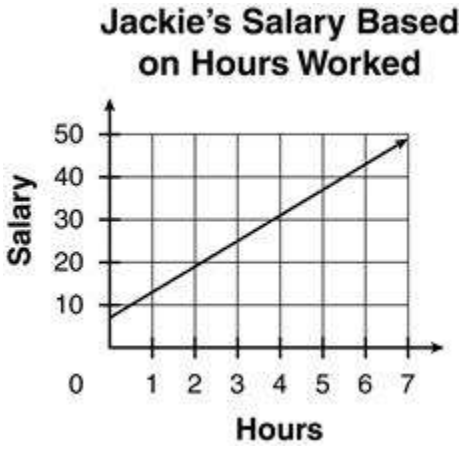
B. 30 cents for 6 days late, since $\frac{1}{6} \neq \frac{30}{5}$

C. 45 cents for 11 days late, since $\frac{11}{45} \neq \frac{1}{5}$

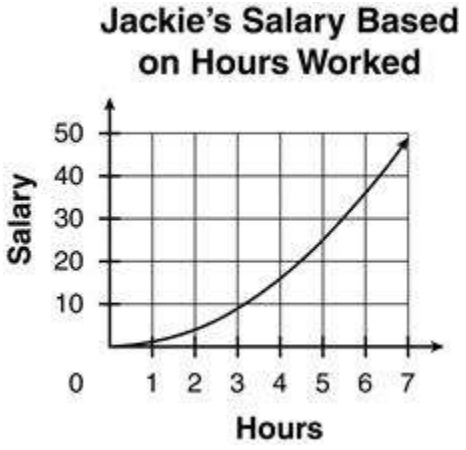
D. 60 cents for 12 days late, since $\frac{60}{5} \neq \frac{1}{12}$

10. **Jackie's salary is proportional to the number of hours she works. Knowing that she made $49 in 7 hours, which graph best models the relationship between the number of hours Jackie works and her salary?**

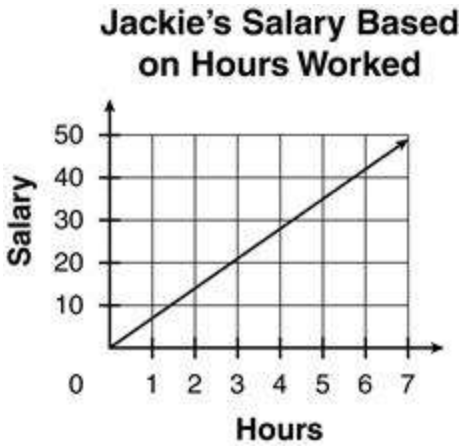
A.



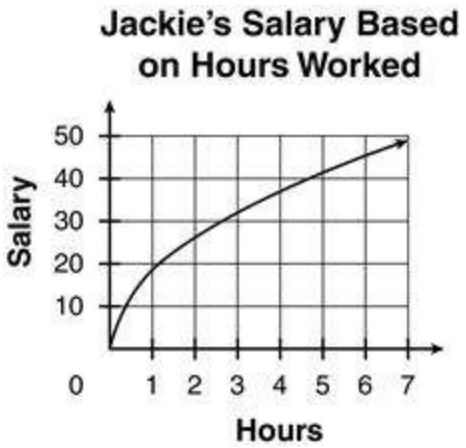
B.



C.



D.



11. A game inventor created a board game that has 15 pieces per game. Which equation shows the relationship between *t*, the total number of pieces, and *n*, the number of copies of the board game the inventor wants to make?

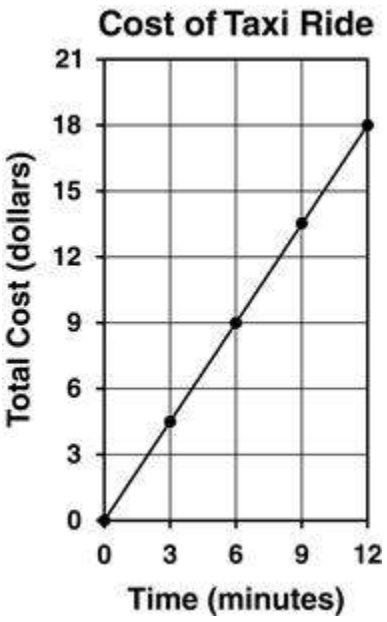
A. $t = n + 15$

B. $t = 15n$

C. $t = \frac{n}{15}$

D. $t = \frac{15}{n}$

12. **The graph below shows a proportional relationship between time and the total cost of a taxi ride.**



Which expression can be used to find the unit rate, in dollars, for a one-minute ride in a taxi?

A. $12 \div 18$

B. $18 \div 3$

C. $9 \div 6$

D. $6 \div 3$

13. **Carlton works at a store. The store manager is taking a 15% discount off of every item in the store during a weekend sale. As an employee, Carlton received a $10 discount certificate to use on any 1 item during the sale. He cannot take advantage of both discounts for the same purchase. Carlton wants to buy a jacket at the store with a regular price of $85. Which statement best supports which discount will give Carlton the better deal?**

A. The 15% discount, since $72.25 is less than $75.00.

B. The $10.00 discount certificate, since $10.00 is less than $75.00.

C. The 15% discount, since $70.00 is less than $72.00.

D. The $10 discount certificate, since $10.00 is less than $15.00.

14. **A bag containing 35 marbles has red and green marbles. If the ratio of green marbles to red marbles is 2 to 5, how many green marbles are in the bag?**

A. 10

B. 14

C. 21

D. 25

15. **A discount store normally sells DVDs for $14.44. If the DVDs go on sale for $13.72, which of the following is closest to the percent of decrease in the price?**

A. .049

B. .052

C. 4.99%

D. 5.25%

16. **An object that weighs 50 newtons on Earth weighs approximately 20 newtons on the planet Mercury. A rock weighs 100 newtons on Earth. What is the approximate weight of the rock, in newtons, on Mercury?**

A. 40

B. 70

C. 170

D. 250