

Name: _____
8.EE.8c

Date: _____

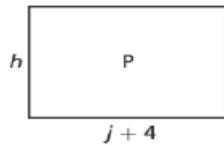
_____ 1. Jenny wants to rent a truck for one day. She contacted two companies. Laguna's Truck Rentals charges \$20 plus \$2 per mile. Salvatori's Truck Rentals charges \$3 per mile. After how many miles will the total cost for both companies be the same? (2015)

- A. 4 B. 6 C. 20 D. 60

_____ 2. Mr. Thomsen is buying two types of gift cards to give as prizes to employees at a company meeting. He will buy restaurant gift cards that each cost \$50. He will also buy movie theater gift cards that each cost \$20. He has \$450 to buy a total of 15 gift cards. How many of each type of gift card can Mr. Thomsen buy? (2016) (no calculator)

- A. He can buy 5 restaurant gift cards and 10 movie theater gift cards.
B. He can buy 8 restaurant gift cards and 7 movie theater gift cards.
C. He can buy 10 restaurant gift cards and 5 movie theater gift cards.
D. He can buy 12 restaurant gift cards and 3 movie theater gift cards.

_____ 3. Two rectangles are shown below. Rectangle P has a perimeter of 20 inches. Rectangle Q has a perimeter of 30 inches. (2017) no calculator



What are the values of j and h ?

- A. $j = 3$ and $h = 3$ C. $j = 2$ and $h = 4$
B. $j = 10$ and $h = 4$ D. $j = 9.5$ and $h = 6.5$

_____ 4. The amount of revenue in dollars, y , that Jason receives from selling x posters is given by the equation $y = 4x$. The cost of producing x posters is given by the equation $y = \frac{1}{2}x + 280$. How many posters does Jason need to sell so that the cost and revenue are equal? (2017)

- A. 40 B. 80 C. 140 D. 320

_____ 5. At a local basketball game, all tickets are the same price and all souvenirs are the same price. Mr. Smith bought 2 tickets to this basketball game and 1 souvenir for a total of \$17.25. Ms. Lockhart bought 5 tickets to the same game and 2 souvenirs for a total of \$42.00. How much was a ticket to this game? (2018)

- A. \$2.25 B. \$7.50 C. \$8.50 D. \$9.75

6. Bert's cab company charges \$1.00 plus an additional \$3.00 per mile for a ride. Madeline's cab company charges \$3.00 plus an additional \$2.00 per mile for a ride.

Write a system of linear equations that shows the cost in dollars, y , for a cab ride of x miles for each cab driver. (2014)

Bert's _____

Madeline's _____

At what distance, in miles, will the cost be the same for both companies?

Show your work.

Answer _____ miles

Which cab driver's charge will be less for a ride that is 10 miles in distance?

Answer _____

Use words and numbers to explain how you determined your answer.

7. Oliver works at a bookstore. He packed 20 identical paperbacks and 9 identical textbooks in a box. The total mass of the books was 44.4 pounds. After he put 1 more textbook and 5 more paperbacks in the box, the total mass of the books was 51 pounds.

Write a system of equations that can be used to determine p , the mass, in pounds, of one paperback, and t , the mass, in pounds, of one textbook. (2016)

Answer

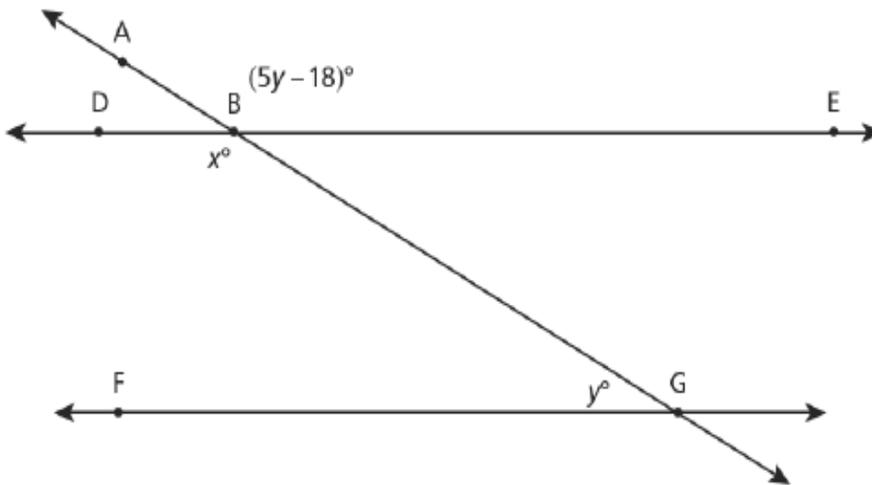
Solve the system of equations to find the two masses.

Show your work.

Mass of one paperback _____ pound(s)

Mass of one textbook _____ pound(s)

8. In the figure below, line DE is parallel to line FG, with transversal AG



Write and solve a system of linear equations to determine the values of x and y . (2017)

Show your work.

Answer $x =$ _____ and $y =$ _____

9. A school district transported a total of 409 students and teachers to a zoo in buses and vans.

- Each bus transported a total of 55 students and teachers.
- Each van transported a total of 12 students and teachers.
- There were 5 more buses than vans.

What is the total number of student and teachers who rode to the zoo in buses?

What is the total number of student and teachers who rode to the zoo in vans? (2018)

Show your work.

Answer: _____ students and teachers rode in buses

_____ students and teachers rode in vans