

Examrace**SAT Questions and Answers Model Paper-5 Important Questions Section F**

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Section - F**Time - 25 minutes****18 Questions**

1. If multiplying k by 7 gives the same result as squaring k , which of the following must be true?

(A) $7 + k = k^2$

(B) $k^2 + k = 7$

(C) $k^2 + 7k = 1$

(D) $7k = 1$

(E) $7k = k^2$

2. Mary earns \$ 50 per week, after taxes, working part – time at a hardware store. Her weekly budget allots \$ 14 for paying back a loan, \$ 16 for miscellaneous expenses, what is the fewest number of weeks that it will take her to save \$ 450?

(A) 9

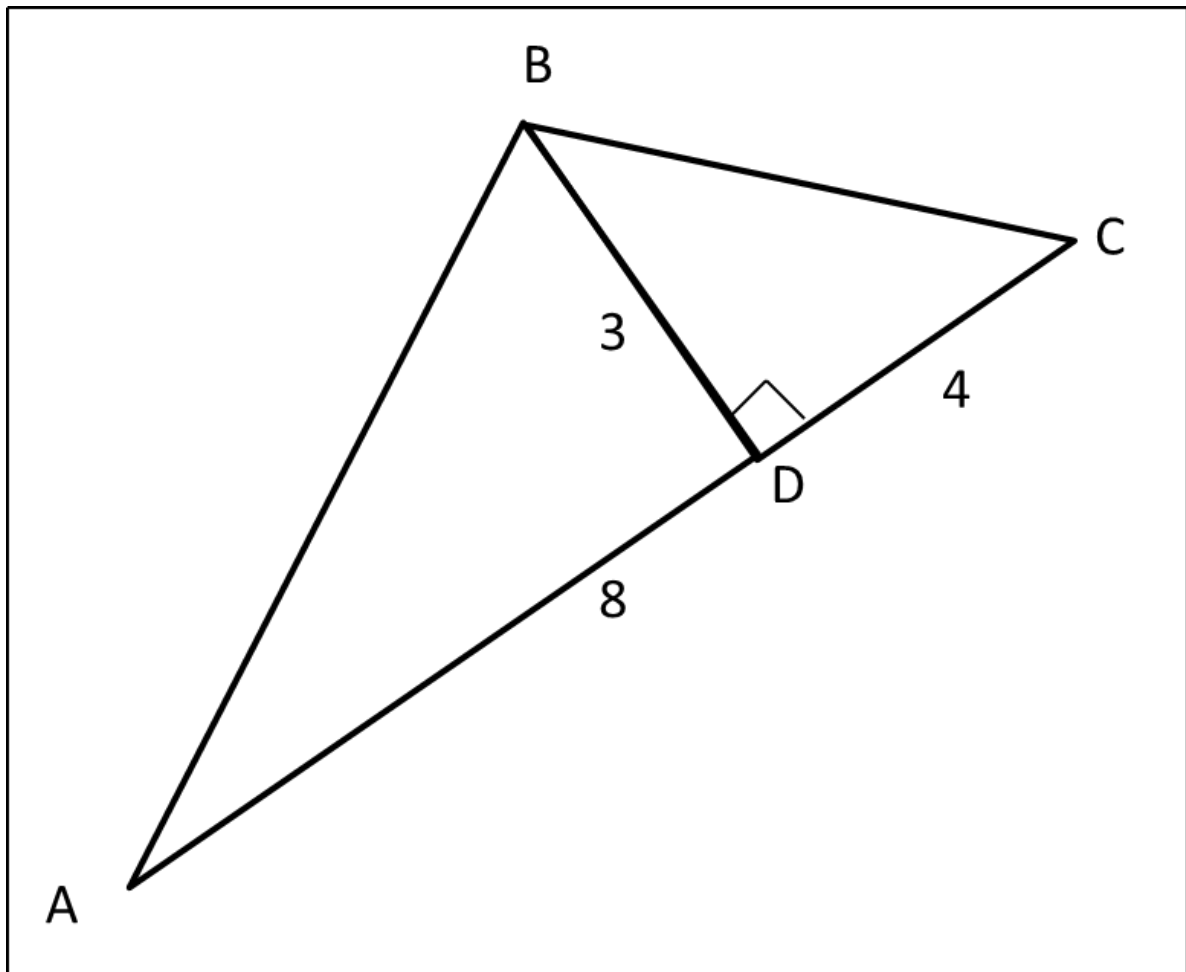
(B) 15

(C) 18

(D) 23

(E) 29

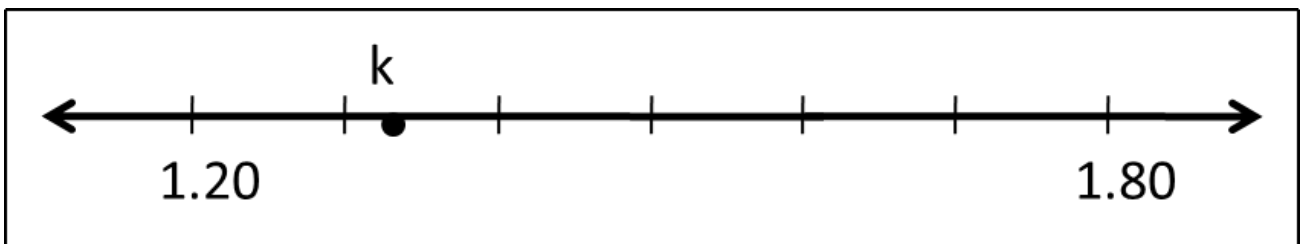
3. What is the area of ΔABC below?



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- (A) 12
- (B) 15
- (C) 18
- (D) 24
- (E) 36

4. On the number line below, which has equally spaced tick marks, k could be equivalent of the following fractions?



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- (A) $\frac{3}{2}$

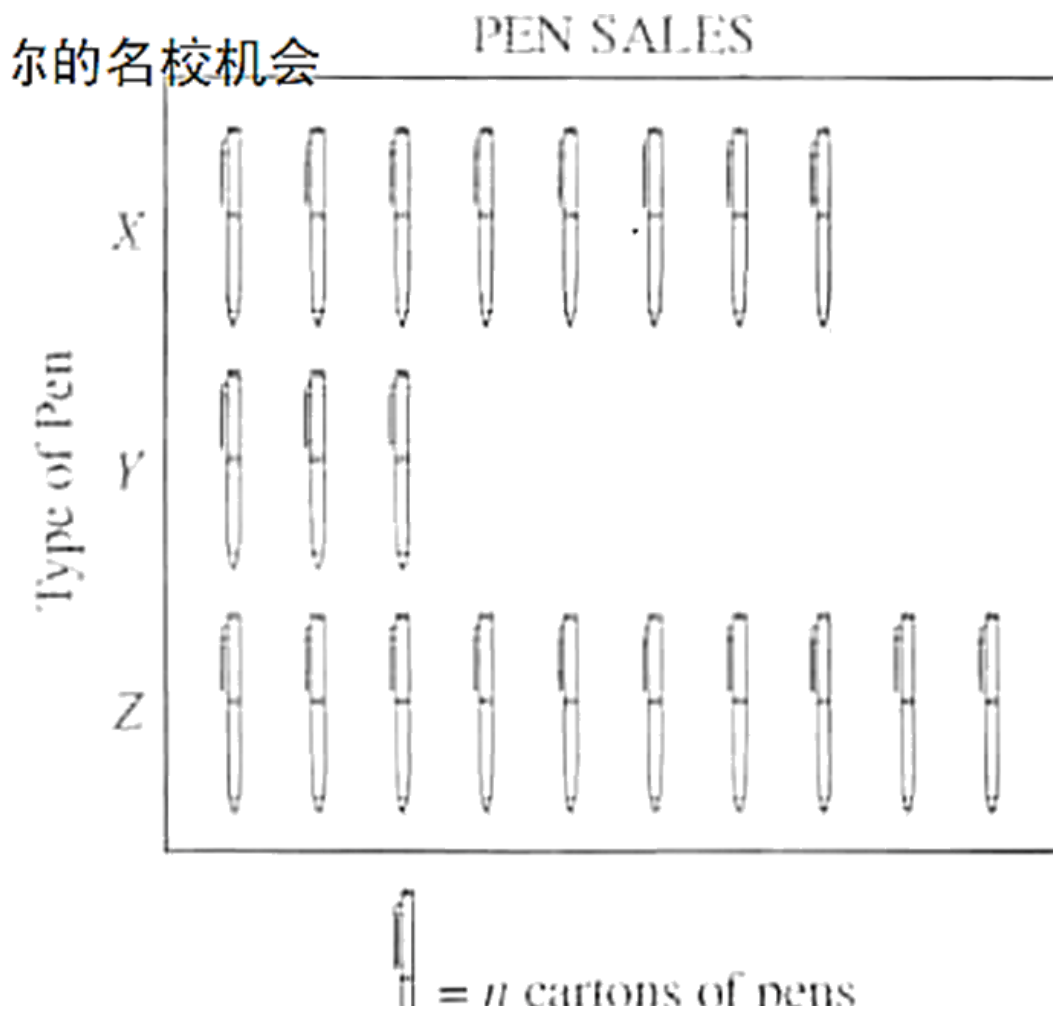
(B) $\frac{4}{3}$

(C) $\frac{5}{4}$

(D) $\frac{6}{5}$

(E) $\frac{7}{6}$

5. The pictograph below shows the number of cartons of three types of pens – X, Y, and Z – that were sold by an office supply company. The company sold 2,000 more cartons of type X pens than type Y pens. How many cartons of type Z pens did the company sell?





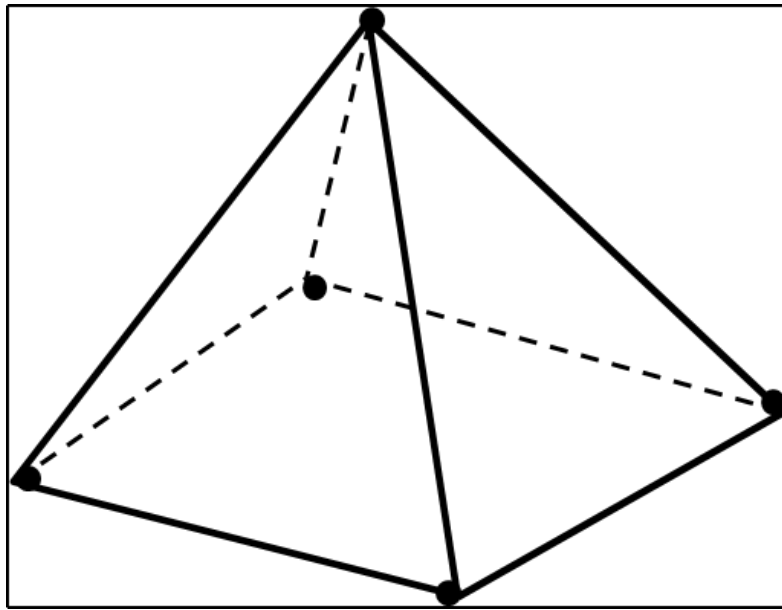
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- (A) 800
- (B) 2,000
- (C) 2,500
- (D) 4,000
- (E) 5,000

6. If $\frac{3b}{2c} = \frac{9}{5}$, what is the value of $\frac{9b}{6c}$?

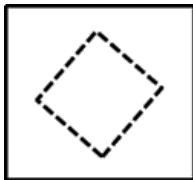
- (A) $\frac{3}{5}$
- (B) $\frac{3}{2}$
- (C) $\frac{9}{5}$
- (D) $\frac{9}{2}$
- (E) $\frac{27}{5}$

7. The figure below is a pyramid with a square base and four equilateral, triangular faces. Points P, Q, R, and S (not shown) are the midpoints of the edges that are not in the plane of the base. Dashed line segments are to be drawn on the triangular faces such that each segment connects two of these points. Which of the following is a representation of how these dashed line segments could appear if viewed through the square base?



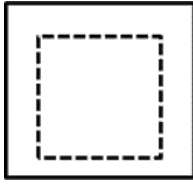
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A.



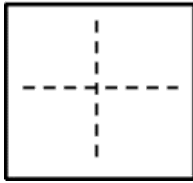
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B.



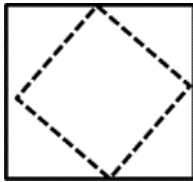
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C.



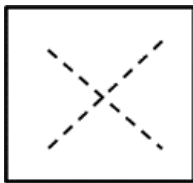
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D.



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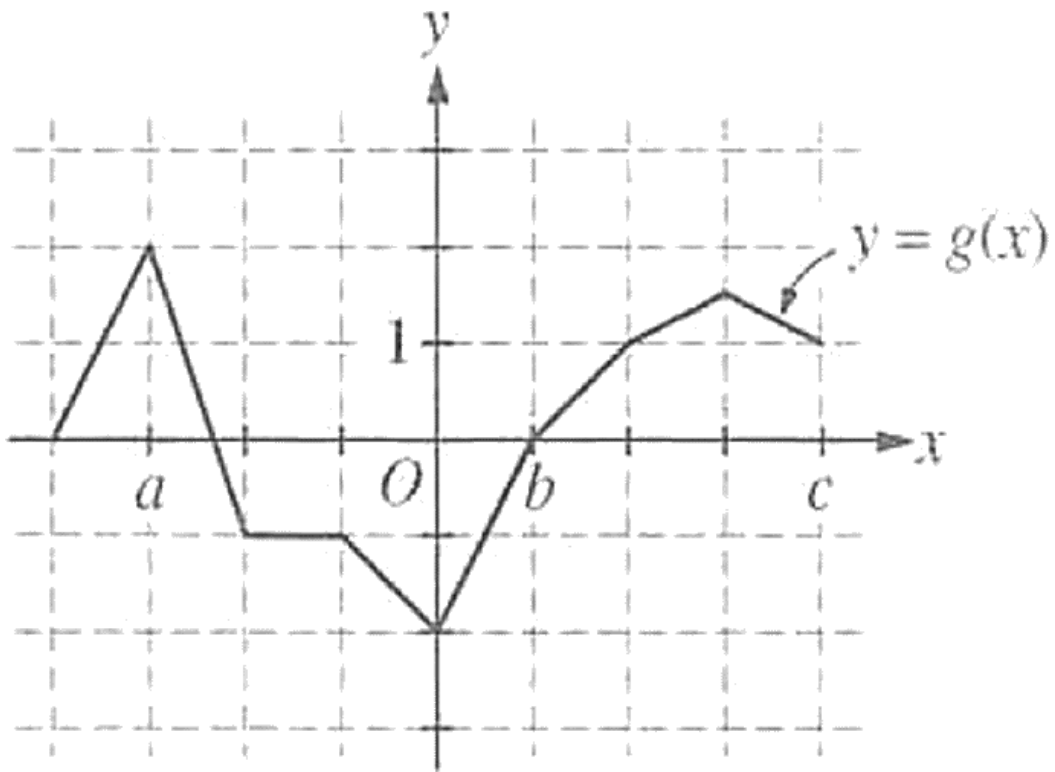
E.



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8. The figure below shows part of the graph of the function g in the xy -plane. Which of the following are true?

- I. $g(b) = 0$
- II. $g(a) > g(c)$
- III. $g(a) + g(0) = 0$



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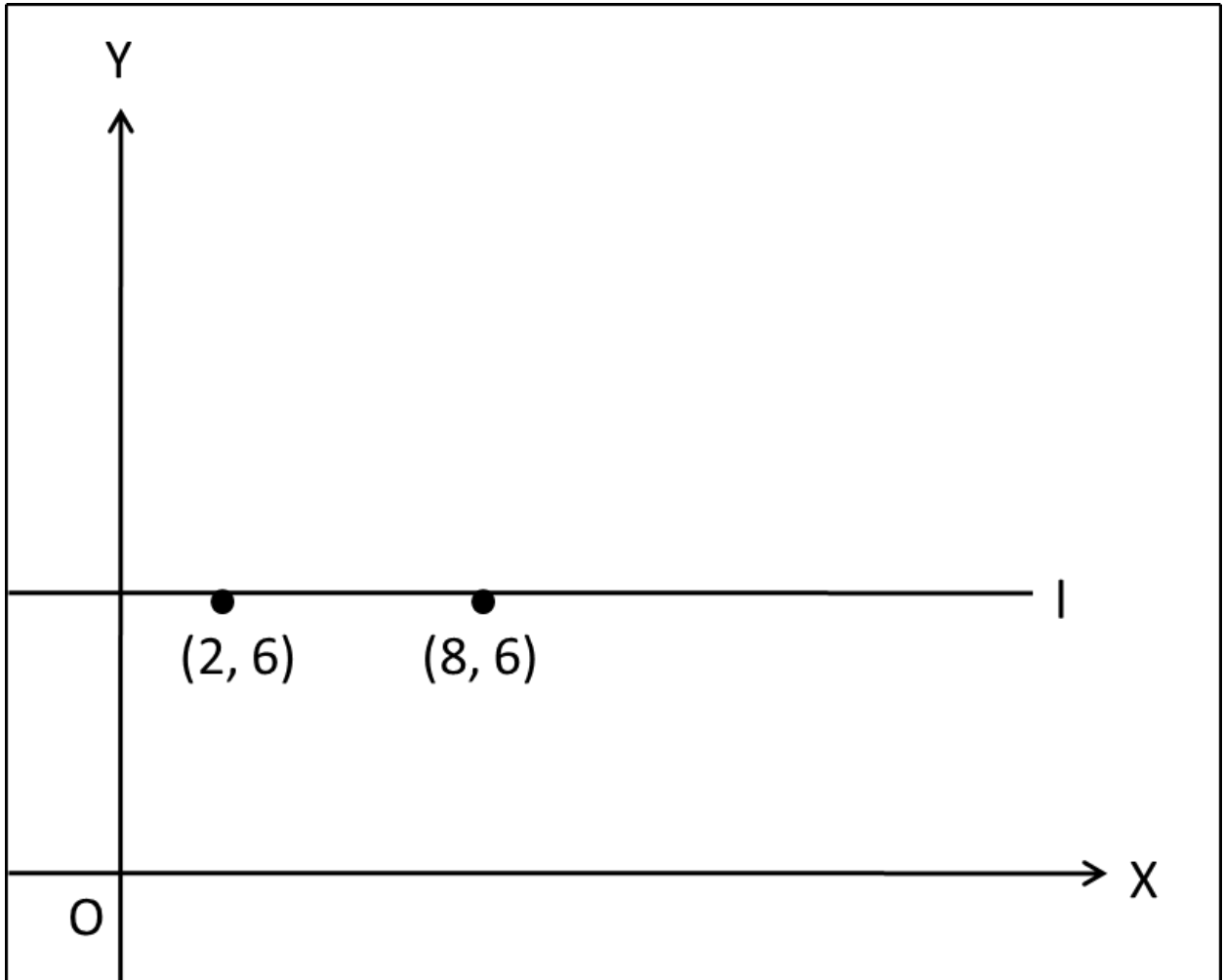
- (A) I only
- (B) II only
- (C) I and II only
- (D) I and III only
- (E) I, II, and III

Note: Item not included for scoring.

10. The first term of the sequence below is 8. Each term after the first term is 5 more than twice the term immediately preceding it. What is the sum of the first four terms of the sequence?

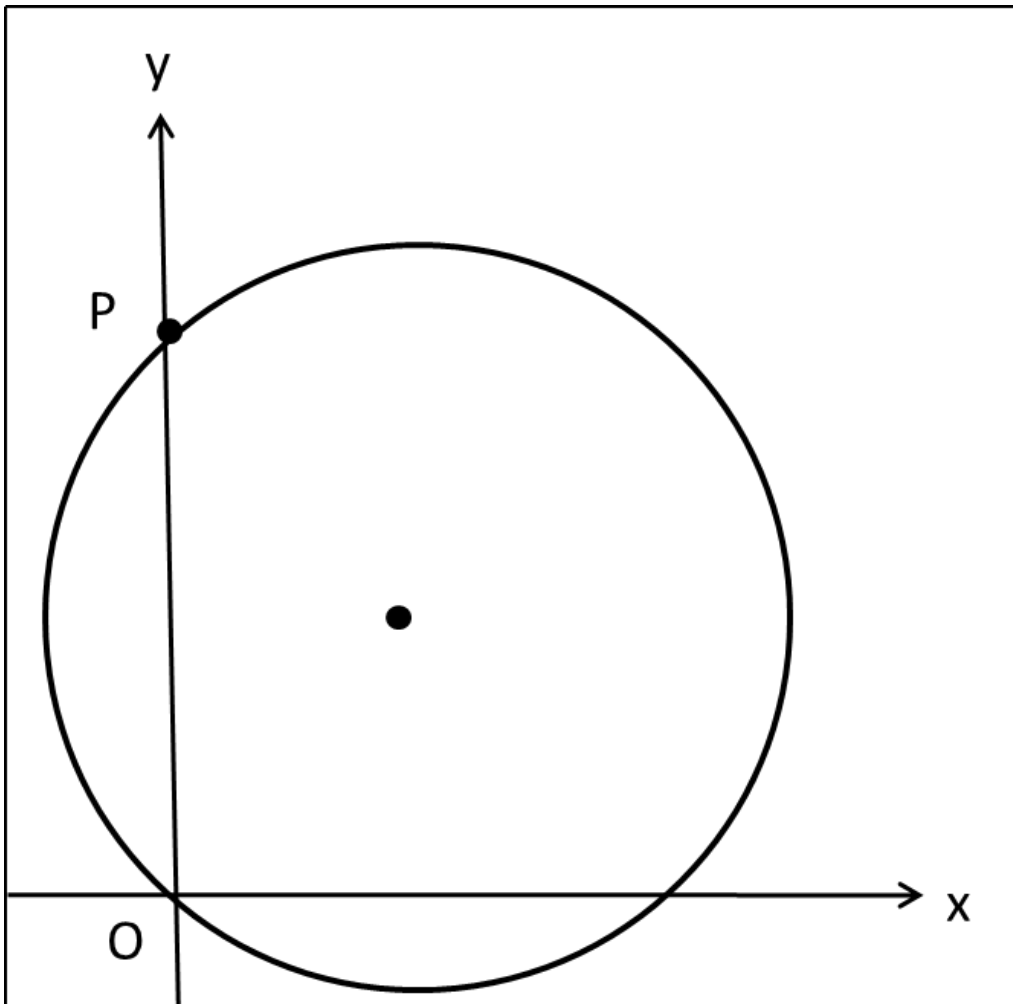
8,21,

- 11.** Michael ran 5.5 miles each day for the day 5 of 6 days. How many miles must he run on the sixth day so that his average (arithmetic mean) for the 6 days will be 6.0 miles per day?
- 12.** A right angle is divided into three non-overlapping angles whose measures are $2x^\circ$, $3x^\circ$, and $5x^\circ$. What is the value of x ?
- 13.** In Lewiston, 4 out of every 7 registered voters voted in the last election. If a total of 2000 votes were cast, what was the number of registered voters in Lewiston at the time of the last election?
- 14.** In the figure below, line l has equation $y = mx + b$, where m and b are constants. What is the value of mb ?



15. If $4x + 8y - 8 = 10$, what is the value of $x + 2y$?

16. The circle in the xy -plane below has center $(5,7)$ and intersects the y -axis at the origin and at point p . What is the y -coordinate of p ?





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17. The positive number n is the product of three different prime numbers greater than 2. If the sum of these three prime numbers is also prime, what is the smallest possible value for n ?

18. A grocery customer spent a total of \$ 9.60 for ground beef and coffee. The coffee cost 2 times as much per pound as the ground beef, and the customer bought 3 times as many pounds of ground beef as pounds of coffee. How much, in dollars, did the customer spend on coffee? (Disregard the \$ sign when gridding your answer. If, for example, your answer is \$ 1.37, grid 1.37)

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