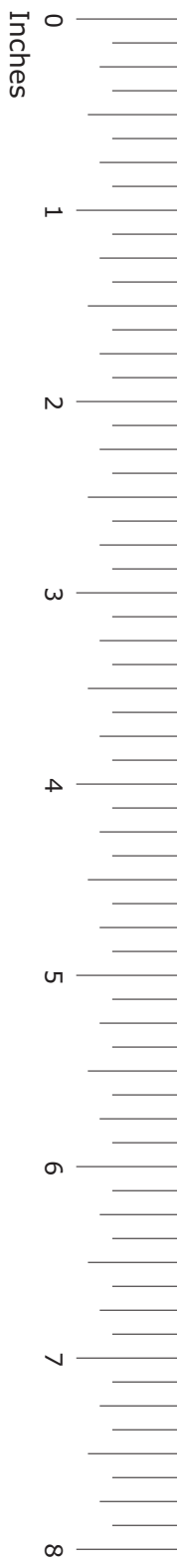
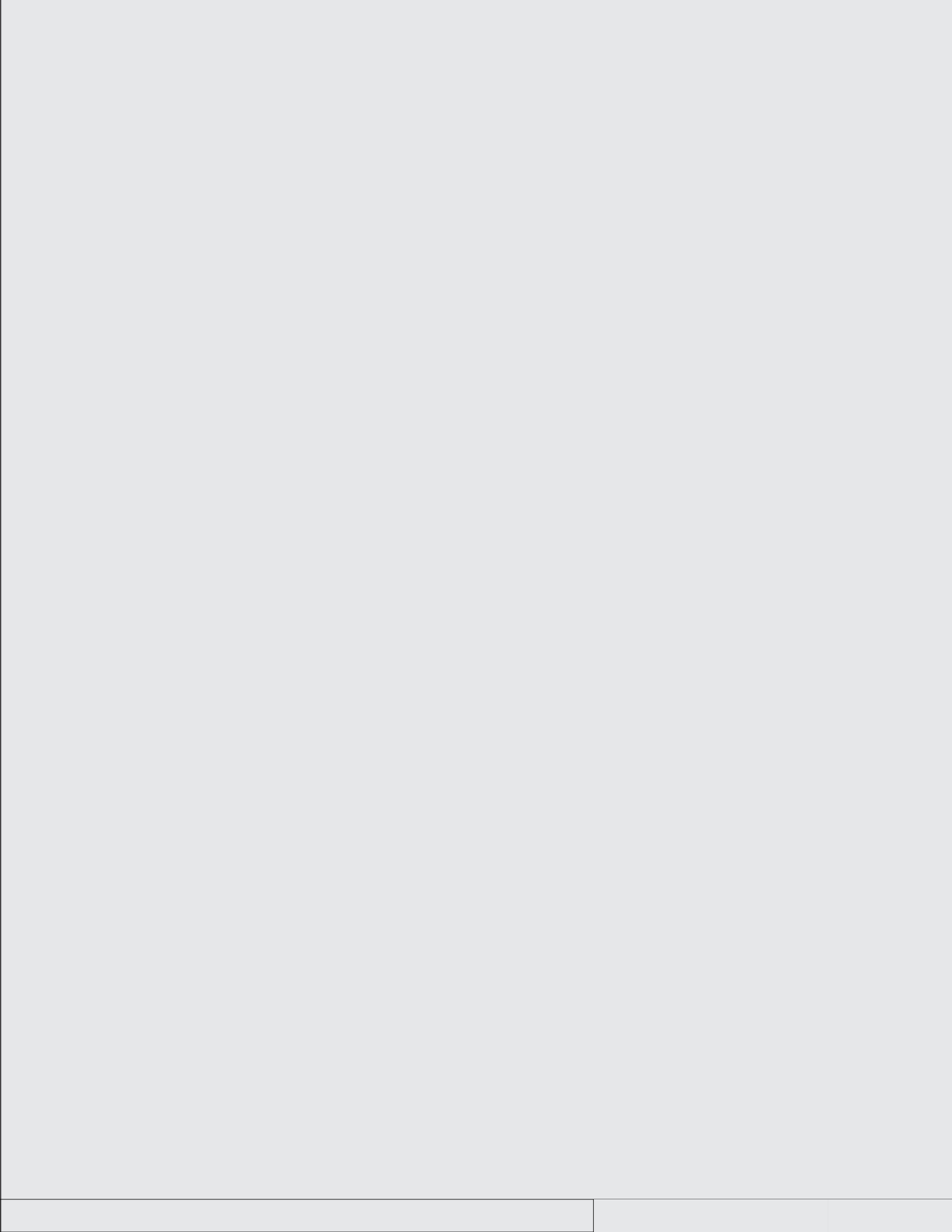


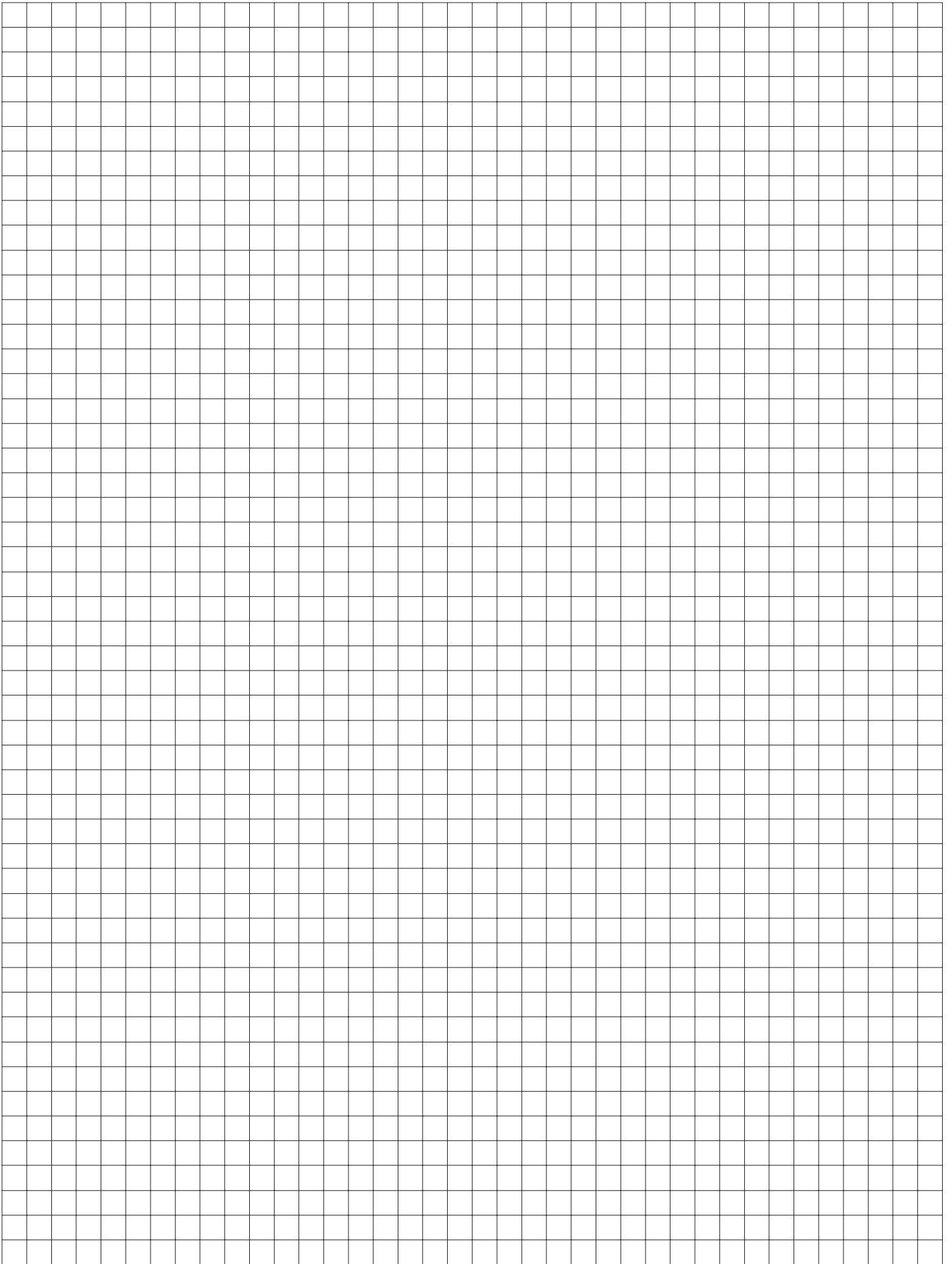
GRADE 7
Mathematics

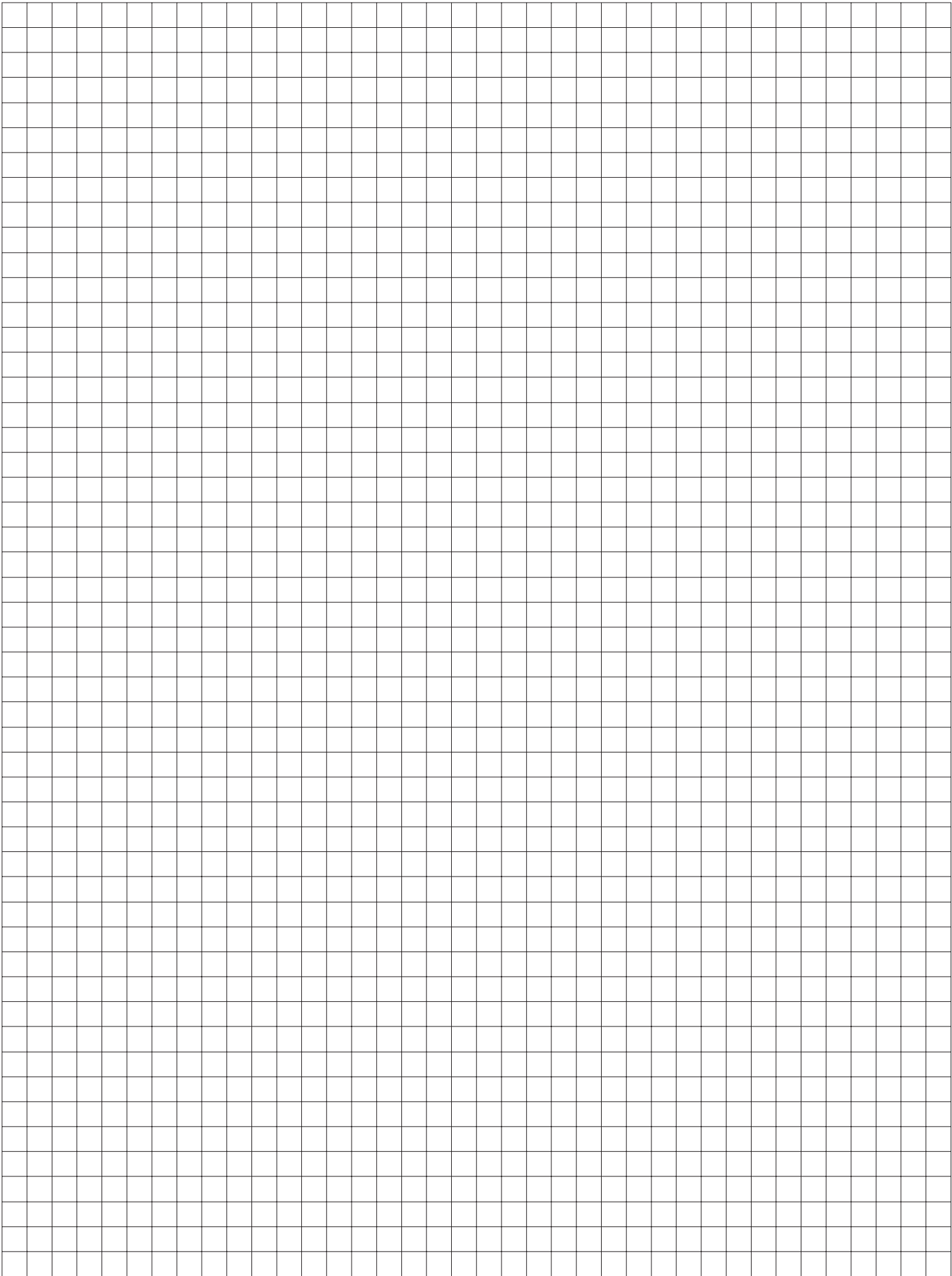
Administered May 2019

RELEASED









MATHEMATICS

DIRECTIONS

Read each question carefully. For a multiple-choice question, determine the best answer to the question from the four answer choices provided. For a griddable question, determine the best answer to the question. Then fill in the answer on your answer document.

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- 4 Pamela rode her bike at a constant rate of 0.1 kilometer per minute. Which table represents y , the number of kilometers Pamela rode her bike in x minutes?

F Bike Ride

Number of Minutes, x	Number of Kilometers, y
5	0.1
10	0.1
15	0.1
20	0.1
25	0.1

H Bike Ride

Number of Minutes, x	Number of Kilometers, y
5	0.1
10	0.2
15	0.3
20	0.4
25	0.5

G Bike Ride

Number of Minutes, x	Number of Kilometers, y
5	0.5
10	1.0
15	1.5
20	2.0
25	2.5

J Bike Ride

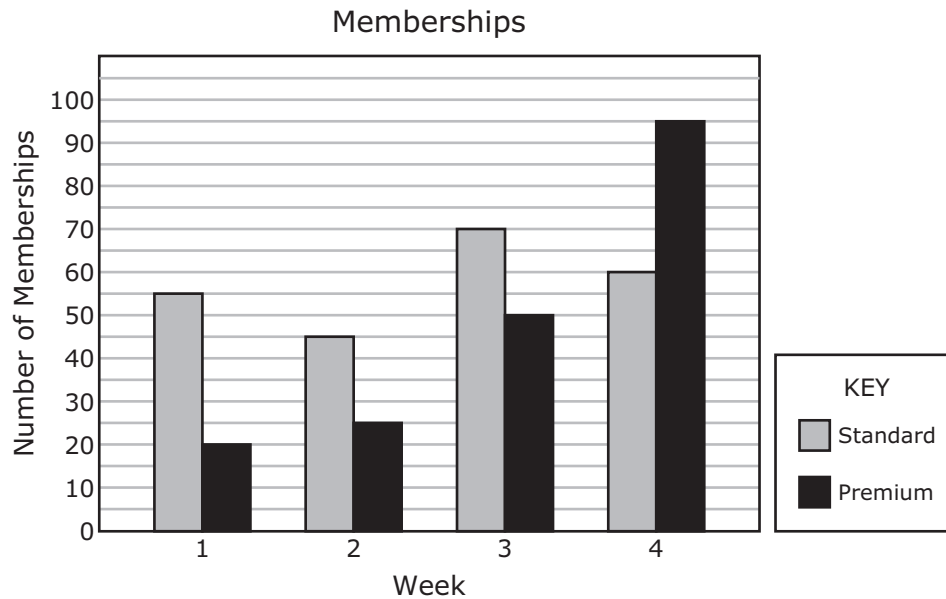
Number of Minutes, x	Number of Kilometers, y
5	5.1
10	10.1
15	15.1
20	20.1
25	25.1

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- 5 A stereo speaker in the shape of a triangular pyramid has a height of 6 inches. The area of the base of the speaker is 11 square inches.

What is the volume of the speaker in cubic inches?

- A 22 in.^3
- B 198 in.^3
- C 66 in.^3
- D 33 in.^3

- 6 A club sold standard and premium memberships. The graph shows the number of each type of membership sold over the last four weeks.



Which statement is supported by the information in the graph?

- F The number of premium memberships sold during Week 4 was 75% more than the number of premium memberships sold during Week 1.
- G The total number of memberships sold during Week 1 was equal to the total number of memberships sold during Week 2.
- H The number of premium memberships sold during Week 3 was 2 times the number of premium memberships sold during Week 2.
- J The total number of memberships sold during Week 4 was 35 less than the total number of memberships sold during Week 3.

- 7 Vincent flipped three coins during a probability experiment. The outcomes of the first 40 trials are shown in the table.

Probability Experiment

Faces Showing on Flipped Coins	Number of Outcomes
3 tails	4
1 head, 2 tails	13
2 heads, 1 tail	16
3 heads	7

Based on the information in the table, in how many of the next 120 trials will the outcome be exactly two of the coins showing heads?

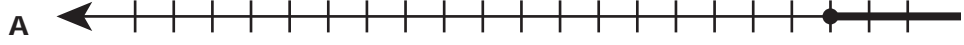
- A 60
- B 87
- C 39
- D 48

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- 8 Chris bought 10.4 gallons of gasoline. There are approximately 3.8 liters in 1 gallon.

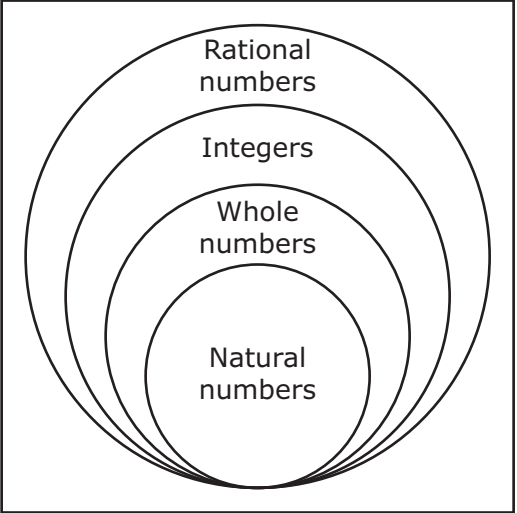
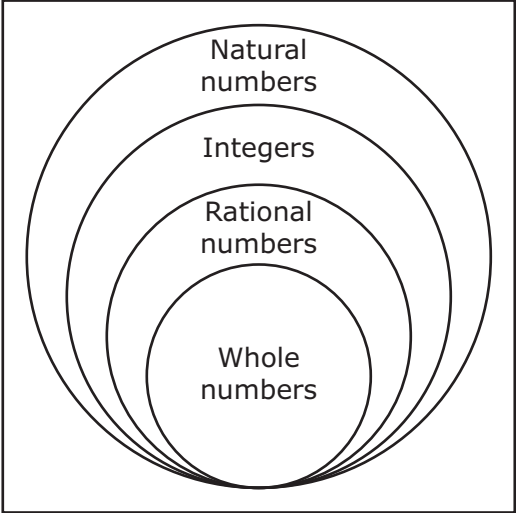
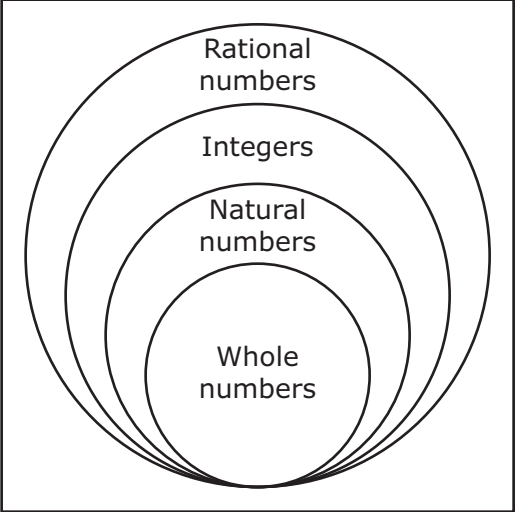
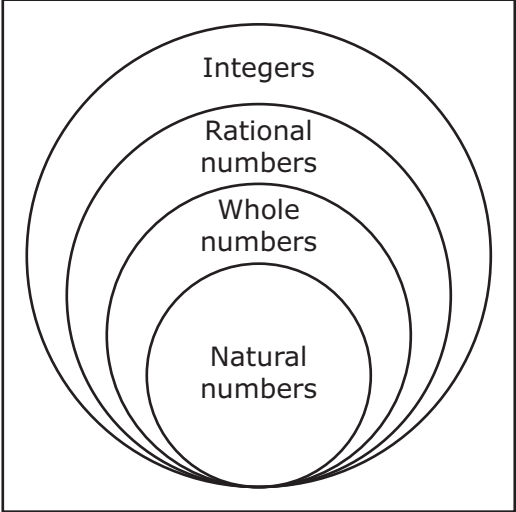
Which measurement is closest to the number of liters of gasoline Chris bought?

- F 11.44 L
- G 2.74 L
- H 39.52 L
- J 14.20 L

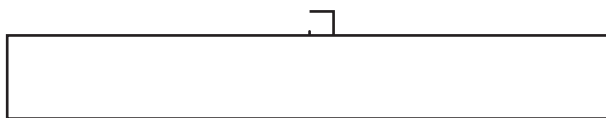




10 Which



- 11 The net of a triangular prism is shown. Use the ruler provided to measure the dimensions of the net to the nearest half centimeter.

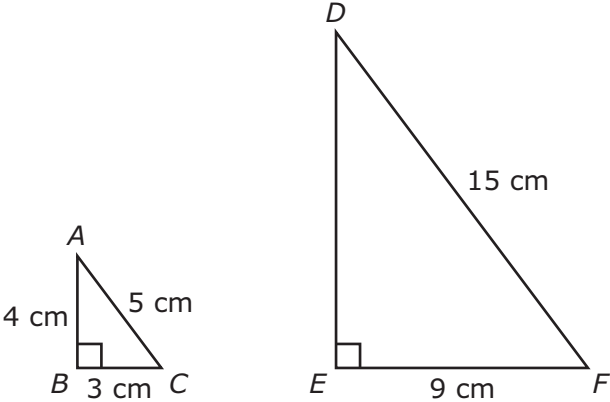


12 What is the solution to this equation?

$$2x + 10 = 28$$

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

13 Triangle ABC is similar to triangle DEF .



Which proportion can be used to find the length of DE ?

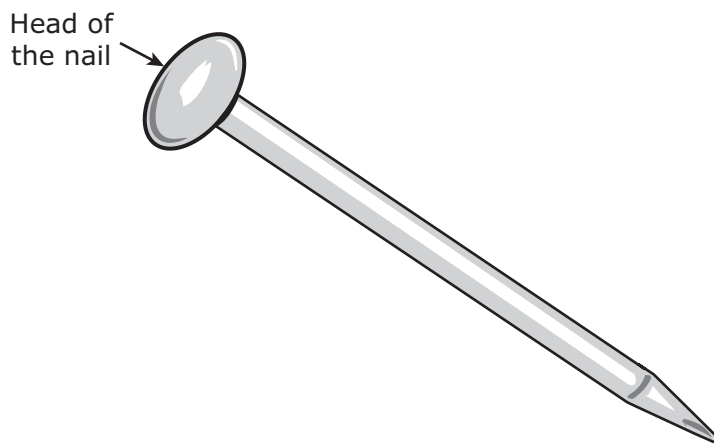
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14 The head of a nail is circular, as shown. The head of this nail has a diameter of 6 millimeters.



Which measurement is closest to the area of the head of this nail in square millimeters?

F 9.42 mm²

- 16 The table shows the number of bottles of different kinds of juice sold at a cafeteria on Monday.

Juice Sold

Kind of Juice	Number of Bottles Sold
Apple	11
Cranberry	7
Orange	18
Pineapple	4

be cafeteria has

If the cafeteria has 80 customers on Tuesday, which prediction for Tuesday is NOT supported by the data in the table?

- F The number of bottles of orange juice sold is 18.

19 Phillip created the net worth statement shown.

Net Worth Statement

Asset	Value
Home (Market Value)	\$120,000
Bank of America Savings	\$25,000
Bank of America Checking	\$10,000
Bank of America Money Market	\$10,000
Total Assets	\$165,000
Liabilities	
Bank of America Credit Card	\$25,000
Bank of America Student Loan	\$10,000
Total Liabilities	\$35,000

Based on the information in the statement, what is Phillip's net worth?

- A \$14,500
- B \$41,500
- C -\$51,500
- D -\$41,500

20 Leon created a scale drawing of the school library in his art class. In the scale drawing, the length of the library is 13 inches. The length of the actual library is 5 feet.

Which scale did Leon use to create the scale drawing of the school library?

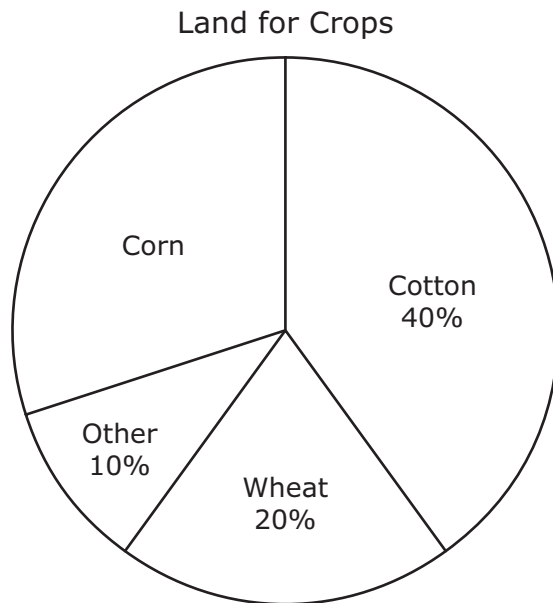
- F 1 inch represents 1 foot
- G 1 inch represents $\frac{1}{5}$ foot
- H 1 inch represents 1 foot
- J 1 inch represents $\frac{1}{13}$ foot

- 21** This week Andres will practice with his band for $1\frac{1}{2}$ hours on Monday, $1\frac{3}{4}$ hours on Tuesday, and 2 hours on Wednesday. Next week Andres will practice with his band for the same number of hours on Monday, Tuesday, and Wednesday.

What is the total number of hours Andres will practice with his band over these 6 days?

- A** $5\frac{1}{4}$ hours
- B** $10\frac{1}{2}$ hours
- C** $4\frac{1}{4}$ hours
- D** $8\frac{1}{2}$ hours

- 22 A farmer plants crops on 48 acres of land. The circle graph shows the percentages of land used for some of the different types of crops.



Based on the circle graph, how many acres of land are used for corn?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

26 The circumference of a circle is C centimeters. The diameter of the circle is 13 centimeters.

Which expression best represents the value of π ?

F $\frac{C}{6.5}$

G $\frac{6.5}{C}$

H $\frac{C}{13}$

J $\frac{13}{C}$

27 What is the solution set for this inequality?

$$-8x + 40 > -16$$

A $x > 7$

B $x < 7$

C $x > -3$

D $x < -3$

28 Zachary is buying 4 tires for his car. The

- 29 At a school carnival, tickets can be purchased to participate in different activities. The table shows the total cost for different numbers of tickets.

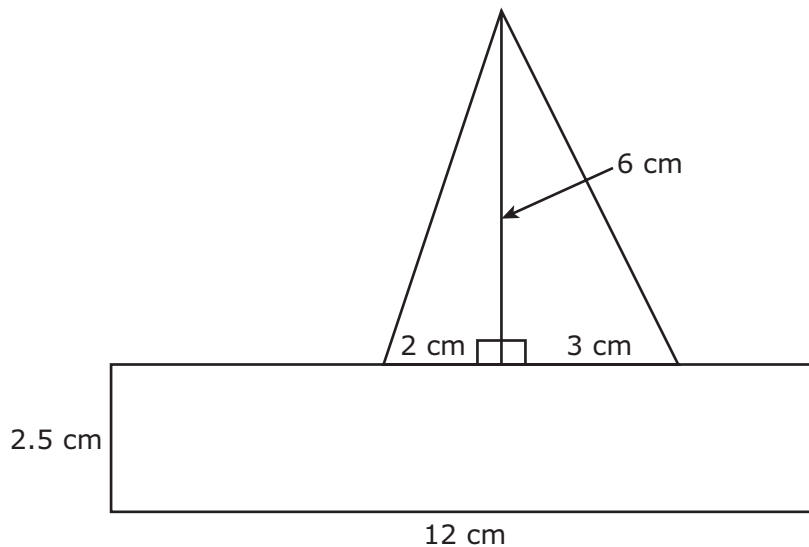
School Carnival

Number of Tickets, x	Total Cost, y (dollars)
8	2.00
12	3.00
20	5.00
30	7.50
50	12.50

What is the constant of proportionality that relates y , the total cost in dollars, to x , the number of tickets purchased?

- A 4.00
- B 0.25
- C 1.00
- D 0.10

30 A drawing of a sailboat was made using a rectangle and two right triangles, as shown.



What is the area of the drawing of the sailboat in square centimeters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

31 Perry traveled at an average speed of 55 miles per hour for 3.5 hours and then traveled at an average speed of 60 miles per hour for 2.5 hours. What was the total distance in miles that Perry traveled during this time?

- A 347.5 mi
- B 330 mi
- C 360 mi
- D 342.5 mi

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- 38 A college conducted a survey of randomly selected freshmen about their choice of major. The table shows the results of the survey.

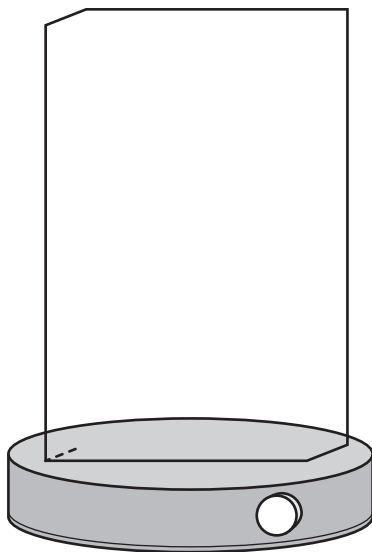
Freshmen Majors

Major	Number of Freshmen
English	50
Science	35
Engineering	40
Business	45
Education	60
Undecided	50
Other	20

Which inference about all freshmen at this college is best supported by this information?

- F The number of freshmen who chose English as their major is less than the number of freshmen who are Undecided on their major.
- G The number of freshmen who chose Education as their major is greater than the number of freshmen who chose Science or Other as their major.
- H The number of freshmen who chose Business or Education as their major is less than the number of freshmen who chose Science or Engineering as their major.
- J The number of freshmen who chose Business as their major is greater than the number of freshmen who chose English as their major.

39 A ringtoss toy is composed of a rectangular prism on top of a cylinder. The rectangular prism is completely filled with water. The dimensions of the rectangular prism are shown in the diagram.



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