

MATHEMATICS

Grade 8

2011 Released Test Questions

These released questions represent selected TEKS student expectations for each reporting category. These questions are samples only and do not represent all the student expectations eligible for assessment.

- 1 Mr. Valdez plans to open a savings account. The annual interest rates offered by 4 banks are shown below.

$$2\frac{1}{2}\%, 2\frac{3}{8}\%, 2\frac{4}{5}\%, 2\frac{2}{3}\%$$

Which list shows these interest rates in order from greatest to least?

- A $2\frac{3}{8}\%$, $2\frac{4}{5}\%$, $2\frac{2}{3}\%$, $2\frac{1}{2}\%$
- B $2\frac{3}{8}\%$, $2\frac{1}{2}\%$, $2\frac{2}{3}\%$, $2\frac{4}{5}\%$
- C $2\frac{4}{5}\%$, $2\frac{3}{8}\%$, $2\frac{2}{3}\%$, $2\frac{1}{2}\%$
- D $2\frac{4}{5}\%$, $2\frac{2}{3}\%$, $2\frac{1}{2}\%$, $2\frac{3}{8}\%$
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- 2 A recipe that makes $1\frac{1}{2}$ dozen cookies requires $\frac{3}{4}$ cup of sugar. Shanika wants to make 6 dozen cookies. How many cups of sugar will she need?
- A $1\frac{1}{8}$ cups
- B 4 cups
- C $6\frac{3}{4}$ cups
- D 3 cups

- 3 Gabriel can type 90 words in 65 seconds. Which equation can be used to find w , the number of words Gabriel can type at this rate in 125 seconds?

A $w = \frac{90}{65}(125)$

B $w = \frac{65}{90}(125)$

C $w = \frac{90(65)}{125}$

D $w = \frac{125}{90(65)}$

- 4 Macaleh compared the prices of four different brands of coffee.

Coffee	Price			
	4 ounces	8 ounces	12 ounces	16 ounces
Brand I	\$1.15	\$2.30	\$3.45	\$4.60
Brand II	\$2.00	\$3.80	\$5.40	\$6.80
Brand III	\$2.00	\$3.00	\$5.00	\$8.00
Brand IV	\$3.30	\$4.45	\$6.60	\$7.75

Which brand of coffee offers a proportional relationship between its weight and its price?

- A Brand I
B Brand II
C Brand III
D Brand IV

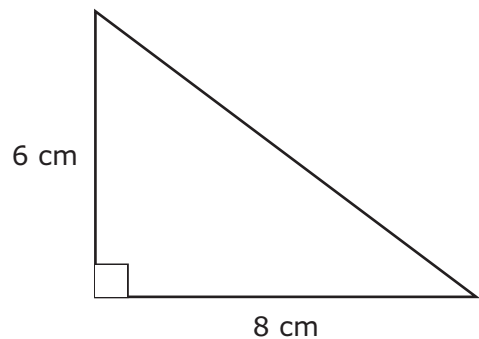
- 5 Last week a certain brand of bottled water cost \$1.25 for a 16-ounce bottle. This week the water is on sale for \$1.00 for a 16-ounce bottle. What is the percent decrease in the price of this bottled water?
- A 16%
- B 13%
- C 20%
- D 25%

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- 6 Which equation best represents the data in the table below?

x	0	3	6	9	12
y	3	7	11	15	19

- A $4x - 3y = 12$
- B $4x - 3y = -9$
- C $3x - 4y = -12$
- D $3x - 4y = 9$

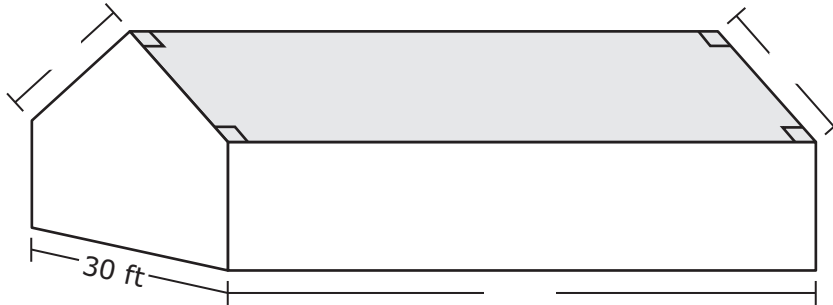
- 7 A right triangle is shown below.



The triangle is dilated by a scale factor of 2.5 to create a new triangle. What is the perimeter of the new triangle?

- A 120 cm
- B 24 cm
- C 60 cm
- D 150 cm

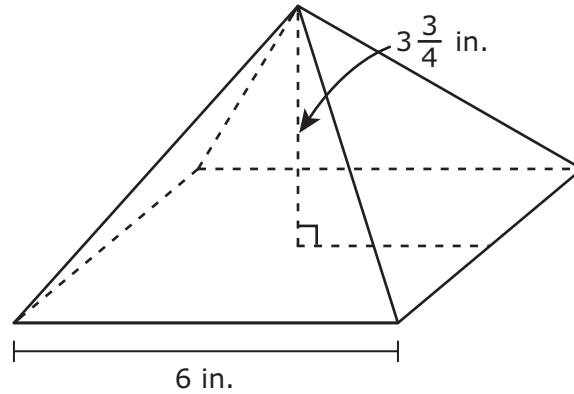
- 8 Mr. Barber wants to have the entire roof of his house replaced. A drawing of his prism-shaped house is shown below.



The cost of replacing the roof is \$2.10 per square foot. What will be the cost for Mr. Barber to have the roof replaced?

- A \$1,760
- B \$3,465
- C \$880
- D \$3,696

- 9 The paperweight shown below is in the shape of a square pyramid.

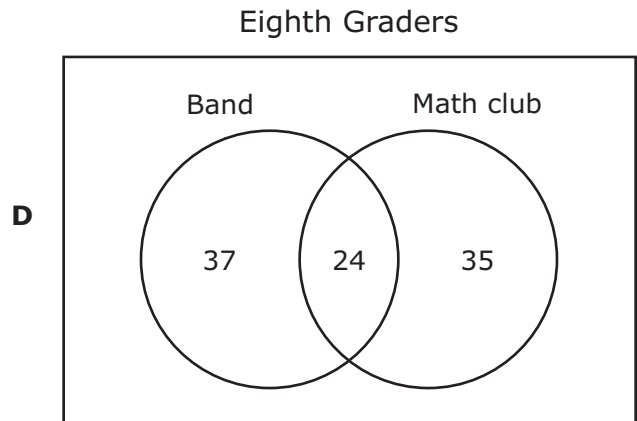
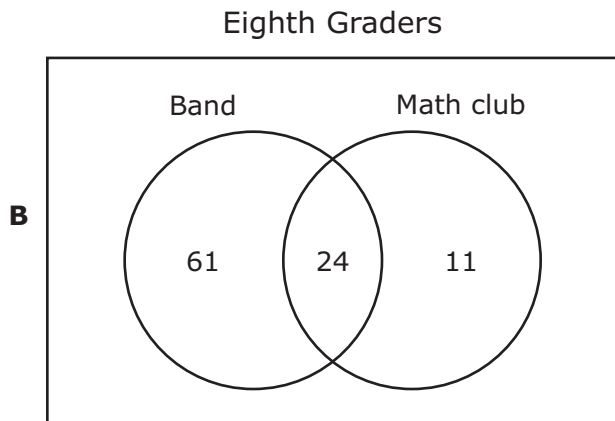
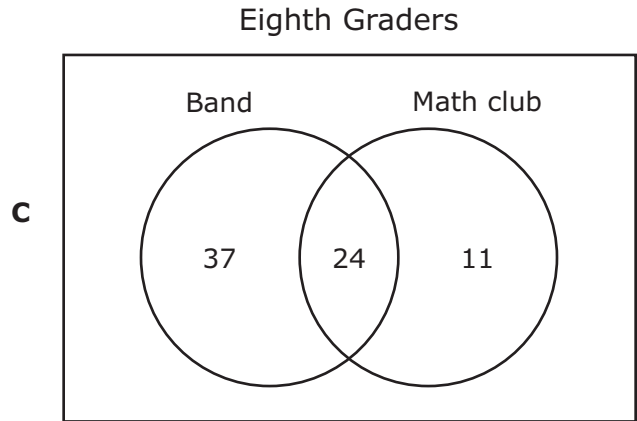
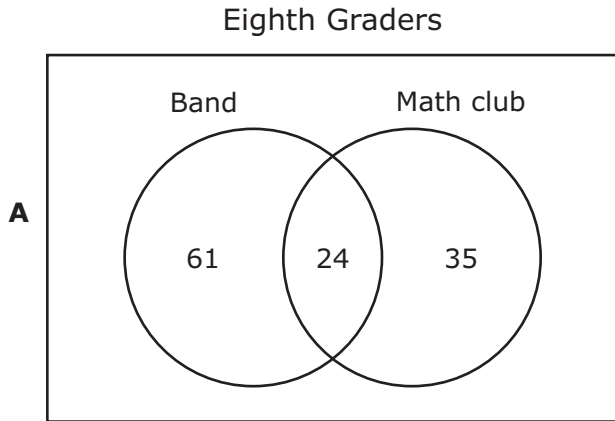


What is the volume of this paperweight?

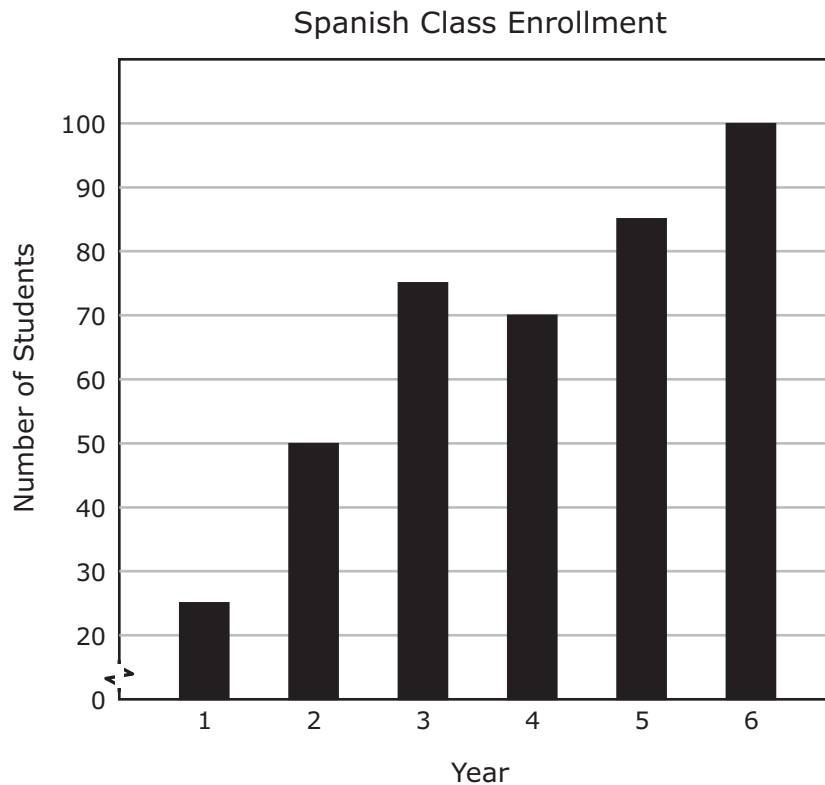
- A 135 in.^3
- B $22\frac{1}{2} \text{ in.}^3$
- C 45 in.^3
- D $112\frac{1}{2} \text{ in.}^3$
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- 10 A 20-foot ladder is leaning against the side of a building. The bottom of the ladder is 4 feet from the wall. How many feet above the ground does the ladder touch the wall?
- A 16 ft
- B $\sqrt{384}$ ft
- C 12 ft
- D $\sqrt{416}$ ft

- 11** The dimensions of a rectangle are dilated using a scale factor of $\frac{2}{3}$. What is the relationship between the new area and the original area?
- A** The area of the new rectangle is $\frac{8}{3}$ the original area.
- B** The area of the new rectangle is $\frac{2}{3}$ the original area.
- C** The area of the new rectangle is $\frac{4}{9}$ the original area.
- D** The area of the new rectangle is $\frac{8}{27}$ the original area.
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- 12** Rufus has a box that contains cards of the same shape and size. There are 5 yellow cards, 4 red cards, and 1 purple card. He draws a card at random, replaces it, and draws a second card. What is the probability that both cards will be red?
- A** $\frac{4}{5}$
- B** $\frac{2}{15}$
- C** $\frac{4}{25}$
- D** $\frac{2}{5}$

- 13** At Travis Middle School, 61 eighth graders are members of the band, and 35 eighth graders are members of the math club. There are 24 eighth graders who are members of both groups. Which Venn diagram best represents this information?



- 14** The graph below shows the number of students at Collins Middle School enrolled in Spanish classes over a 6-year period.



Based on the graph, which statement is true?

- A** The number of students enrolled in Spanish increased by about 300% from Year 1 to Year 6.
- B** The number of students enrolled in Spanish during Year 6 was about $7\frac{1}{2}$ times the number enrolled in Spanish in Year 1.
- C** The number of students enrolled in Spanish increased the most from Year 5 to Year 6.
- D** The number of eighth-grade students enrolled in Spanish increased by about 25% each year.

Item Number	Reporting Category	Readiness or Supporting	Content Student Expectation	Process Student Expectation	Correct Answer
1	1	Readiness	8.1(A)		D
2	1	Readiness	8.2(B)	8.14(A)	D
3	1	Supporting	8.2(D)	8.15(A)	A
4	2	Supporting	8.3(A)	8.14(A)	A
5	2	Readiness	8.3(B)	8.14(A)	C
6	2	Readiness	8.4(A)		B
7	3	Readiness	8.6(A)	8.14(C)	C
8	3	Supporting	8.7(B)	8.14(B)	D
9	4	Readiness	8.8(C)	8.14(B)	C
10	4	Readiness	8.9(A)	8.14(B)	B
11	4	Supporting	8.10(A)	8.15(A)	C
12	5	Readiness	8.11(A)		C
13	5	Supporting	8.12(C)	8.15(A)	C
14	5	Readiness	8.13(B)	8.15(A)	A

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