



7.6D (M)

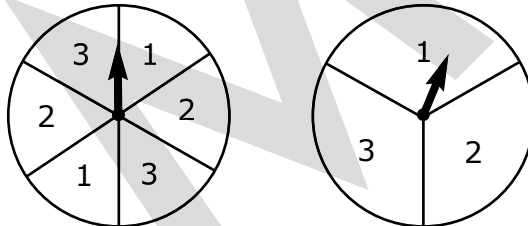
2. A math teacher gave each student in his classes a pair of standard dice. The students each rolled the dice once and recorded their results. How many of his 144 students should the teacher have expected to roll a multiple of 4?

Record your answer in the boxes. Then fill in the bubbles. Be sure to use the correct place value.

					.		
+	0	0	0	0		0	0
-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

7.6I (M)

3. Shane has the two game spinners shown below.



If he spins each once, what is the probability that both spinners will land on 2?

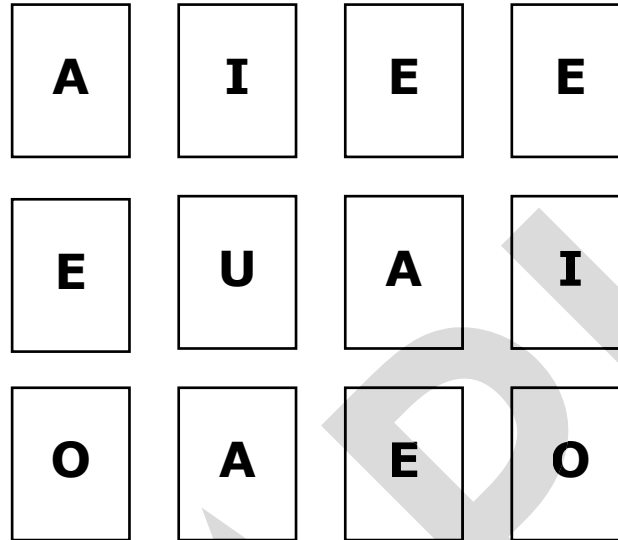
- A $\frac{1}{9}$
- B $\frac{1}{6}$
- C $\frac{1}{3}$
- D $\frac{2}{3}$

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Use the following information to answer questions 1 and 2.

Dmitri has the 12 cards shown below.



After shuffling the cards, he turns them face down on a table. He randomly selects one card, looks at the letter, and returns the card face down to the table.

7.6H (M)

1. Selecting the letter A is less likely than selecting the letter—

- A E
- B I
- C O
- D U

7.6H (M)

2. Selecting the letter I is equally as likely as selecting the letter—

- A A
- B E
- C O
- D U



7.3B (M)

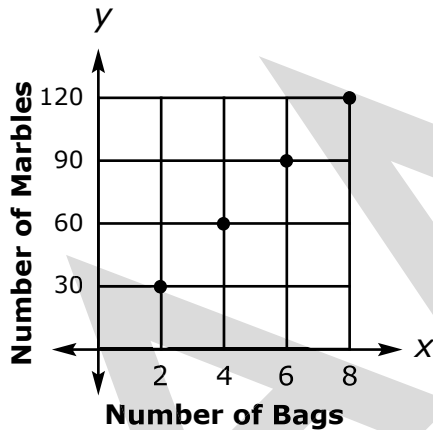
1. Frank owns $3\frac{1}{2}$ acres of land that he wants to develop as a commercial area. If he uses $\frac{3}{4}$ of his land for storage units, how many acres will be used for the storage units?

- A $4\frac{1}{4}$
- B $3\frac{3}{8}$
- C $2\frac{3}{4}$
- D $2\frac{5}{8}$

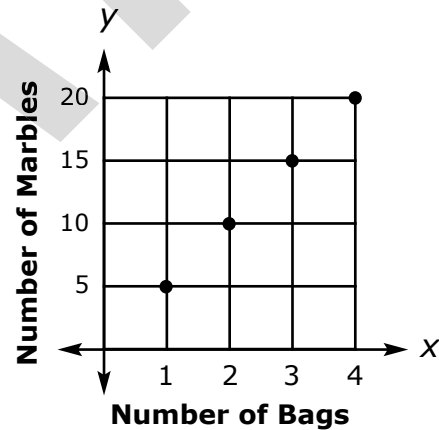
7.4A (M)

2. Brian sells marbles in bags of 15. Which graph could he use to determine the total number of marbles in different numbers of bags?

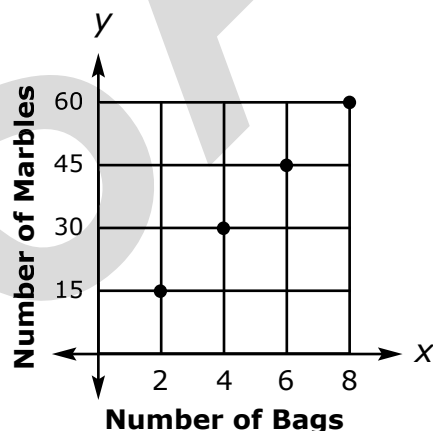
A



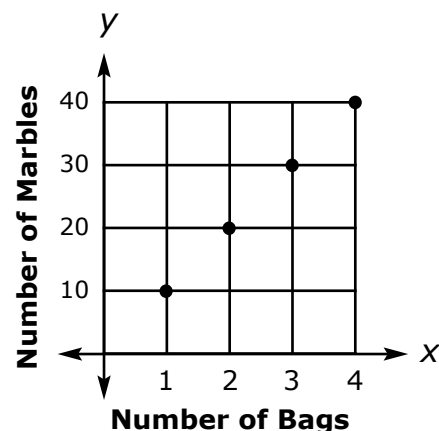
C



B



D

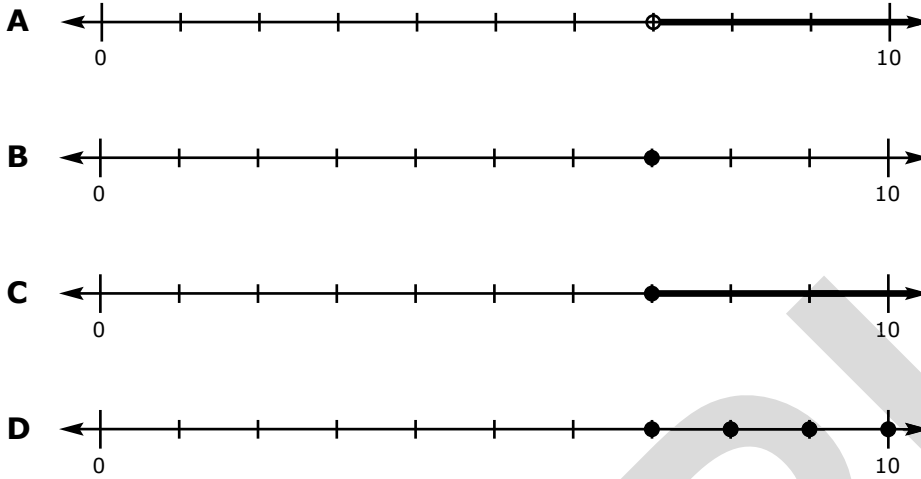


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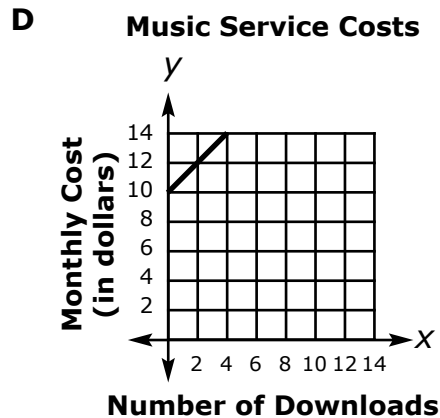
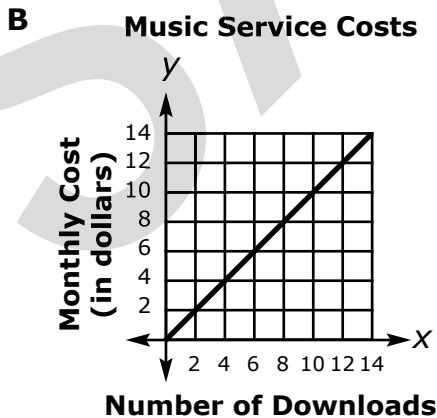
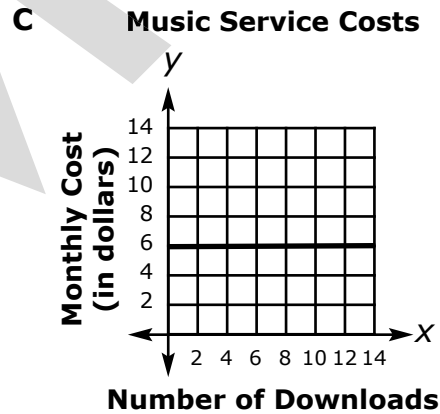
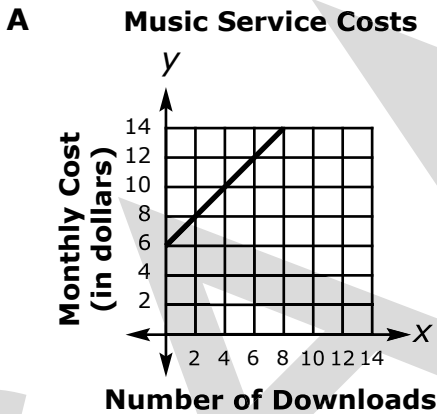
7.11A (M)

1. Which number line best represents the solution(s) for the inequality $7x + 49 > 98$?



7.7A (M)

2. An online music service charges \$6 per month, plus \$1 per song download. Which graph best represents the relationship between the number of song downloads and the total monthly cost of the music service?

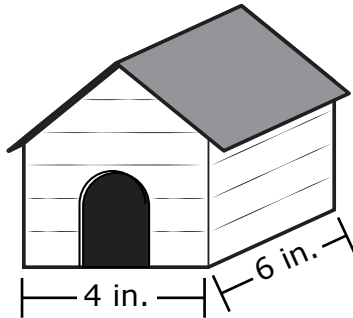


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7.5C (M)

3. Jackie is constructing a rectangular doghouse based on a drawing from a magazine. In the drawing, 2 inches represent 1 foot.

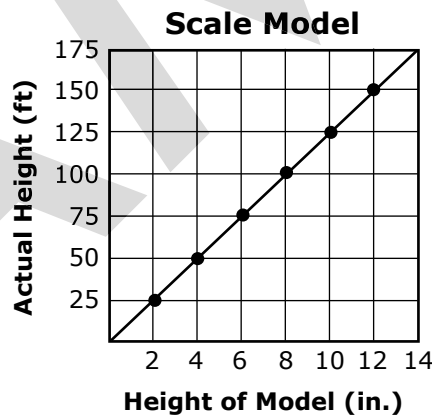


What will be the area of the actual doghouse floor?

- A 24 ft²
- B 12 ft²
- C 6 ft²
- D 3 ft²

7.5C (M)

4. The graph below shows the relationship of a building's height in a scale model to the building's actual height.



What scale was used to create the scale model?

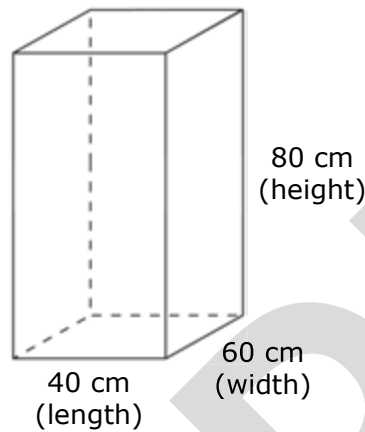
- A 1 in. = 25 ft
- B 1 in. = 150 ft
- C 1 ft = 25 ft
- D 1 in. = 150 in.

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7.9A (H)

1. A soap company redesigned the box for its most popular laundry detergent. The original box is shown below.



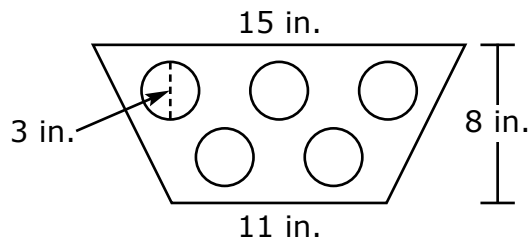
The height of the original box was increased by 20%, but the length remained the same. The width of the original box was reduced so that the new box would contain the same volume of detergent. What was the height and width of the new box?

- A Height = 42 cm; Width = 96 cm
- B Height = 96 cm; Width = 42 cm
- C Height = 50 cm; Width = 96 cm
- D Height = 96 cm; Width = 50 cm

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7.9C (M)

2. Tomás has a sheet of paper shaped like a trapezoid. He cuts 5 equal circles from the sheet of paper, as shown below.



How much of the original paper does Tomás have left? (Use $\pi \approx 3.14$.)

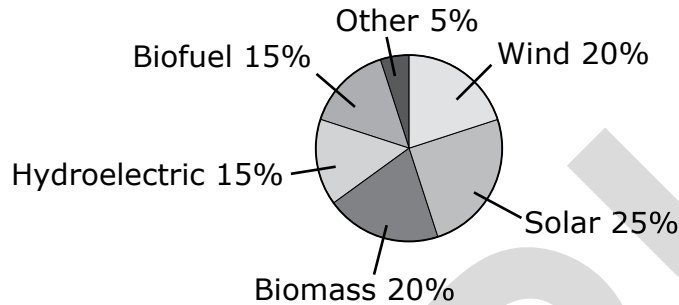
- A 37.3 in.²
- B 66.7 in.²
- C 68.675 in.²
- D 84.675 in.²



7.6G (M)

1. A state representative surveyed 2,000 randomly selected residents about their preferred alternative energy source. The results of the survey are shown on the circle graph below.

Alternative Energy Preferences



Which ratio correctly compares the percentage of residents who prefer solar energy to the percentage of residents who prefer biofuel energy?

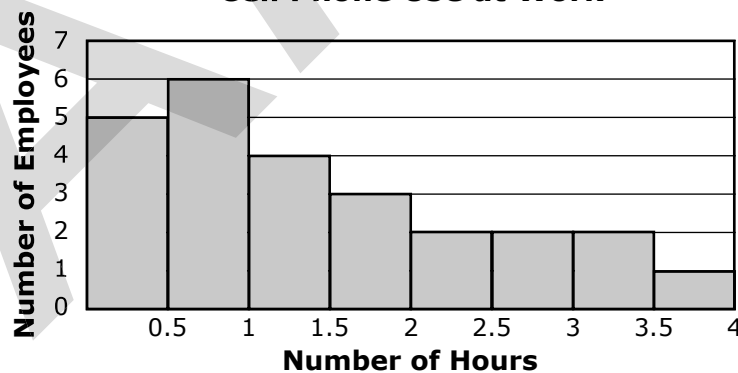
- A 5:3
- B 3:5
- C 5:4
- D 4:5

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7.12B (H)

2. A supervisor asked 25 randomly selected employees of a company's 100 employees how many hours they use their cell phones at work each week. The responses are shown on the histogram below.

Cell Phone Use at Work



Based on these responses, what could the supervisor infer?

- A No employee uses his or her cell phone more than 4 hours per week.
- B Every employee uses his or her cell phone at least 0.5 hours per week.
- C Most of the employees use his or her cell phone less than 1.5 hours per week.
- D Most of the employees use his or her cell phone more than 1.5 hours per week.



7.13C (M)

2. What is the Rauner family’s net worth?

- A \$106,500
- B \$158,250
- C \$199,500
- D \$211,500

7.13D (M)

3. People planning to move to a new location can use a family budget estimator to estimate the amount of money they will need per month to live in that location. A family budget estimator for four different cities appears below. (Note: A family budget estimator does not include information about a person’s income or payroll taxes.)

City A		City B		City C		City D	
Basic Expenses		Basic Expenses		Basic Expenses		Basic Expenses	
Housing	\$920	Housing	\$850	Housing	\$700	Housing	\$900
Food	\$500	Food	\$550	Food	\$520	Food	\$565
Utilities	\$350	Utilities	\$260	Utilities	\$240	Utilities	\$280
Childcare	\$900	Childcare	\$675	Childcare	\$680	Childcare	\$820
Medical Ins.	\$350	Medical Ins.	\$400	Medical Ins.	\$295	Medical Ins.	\$270
Transportation	\$375	Transportation	\$340	Transportation	\$300	Transportation	\$375
Other	\$345	Other	\$375	Other	\$325	Other	\$360
Total	\$3,740	Total	\$3,450	Total	\$3,060	Total	\$3,570

A married couple with one child will move to one of the cities represented in the family budget estimator above. Which city would be the best option if the family wants to save money on food?

- A City A
- B City B
- C City C
- D City D

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