

1. Draw a diagram to show the relationship between natural numbers, whole numbers, integers, and rational numbers.

2. Ernest earned \$36,000 in gross wages last year. He will pay 15% federal income tax based on his gross earnings. How much will Ernest owe in income tax?

Solution: _____

TEKS 7.2A

TEKS 7.13A

3. A leaky fire hydrant is losing water at a constant rate. After 15 minutes, two gallons of water were collected from the leak.

4. The local food pantry has initiated a food drive. Six students brought 90 jars of peanut butter to the food pantry. Assume each student brought the same number of jars. Based on this rate, complete the projection table, and graph the data.

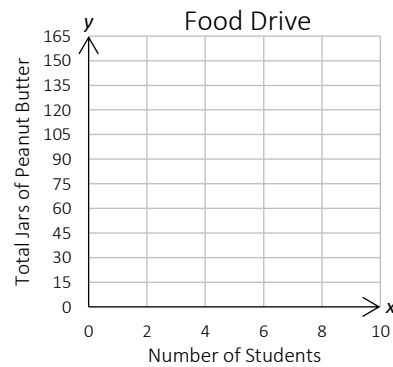


Identify the constant rate. _____

Number of Students, x	1	4	6	10
Number of Jars, y			90	

How many gallons of water will be collected after $1\frac{1}{2}$ hours?

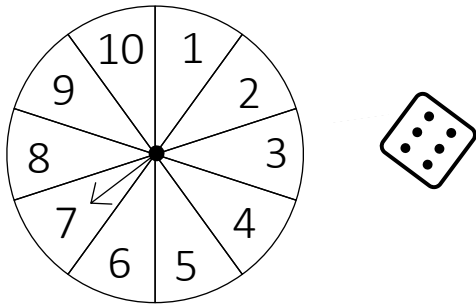
Solution: _____



TEKS 7.4D

TEKS 7.4A

1. A spinner and fair number cube are shown below.



What is the *theoretical probability* that

- a number greater than 7 will be spun on the spinner,
- and the number 4 will be rolled on the number cube?

Simplified fraction: _____

TEKS 7.6D

TEKS 7.4A

3. Marcos put \$2,000 into an account earning 4.5% simple interest annually. If no other deposits or withdrawals are made, how long will it take Marcos to earn \$720 in simple interest?

Solution: _____

TEKS 7.13E

2. A submarine began the day at 20 feet below sea level. It descended at a rate of 15 feet per hour for 5 hours. The equation shown represents this situation.

$$y = -15x - 20$$

Complete the table to show the relationship between y , the depth of the submarine, and x , the number of hours the submarine descended.

		Submarine			
Time (hours)	0				
Depth (feet)	-20				

4. There are 8 bins of 100 light bulbs at the hardware store. In the first bin of light bulbs, 12 defective bulbs were found. If the remaining bins are examined, what is a reasonable prediction?



	Yes	No
Approximately 20 light bulbs will be defective.		
At least 84 light bulbs will be defective.		
More than 700 light bulbs will not be defective.		

TEKS 7.6H

1. Based on a random survey of 75 students, the three candidates running for class president would receive the votes shown in the table.

Candidate	Number of Supporters
Abigail	22
Gregory	24
Jeremiah	29

Based on the survey information, which inferences appear to be reasonable?

	Yes	No
Jeremiah is certain to win.		
Abigail is less likely to win.		
Gregory will receive more than 30% of the votes.		
Jeremiah will receive less than 30% of the votes.		

TEKS 7.12B

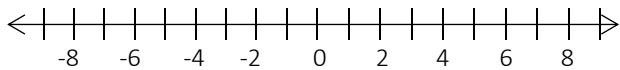
TEKS 7.7A

3. What is the solution set for the inequality shown?

$$8 - 10m > 78$$

Solution: _____

Represent the solution on the number line.



TEKS 7.11A

2. Which equation represents the relationship between the x-values and the y-values in the table?

x	0	2	4	6	10
y	-12	-8	-4	0	8

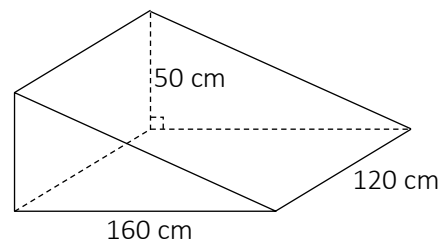
Ⓐ $y = x - 12$

Ⓑ $y = 2x - 12$

Ⓒ $y = -6x - 6$

Ⓓ $y = -x$

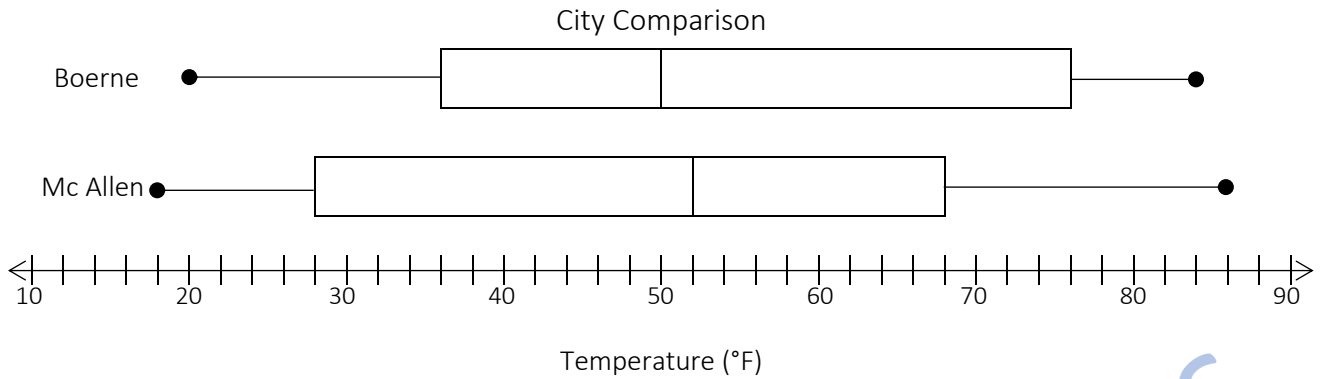
4. Determine the volume of the solid to the nearest cubic centimeter.



Volume: _____

TEKS 7.9A

5. The box plots show the temperatures in two Texas cities during the month of February.



Indicate whether each measure in the table is equal or not equal for the two cities

Measure	Equal	Not Equal
Median	<input type="checkbox"/>	<input type="checkbox"/>
Interquartile Range	<input type="checkbox"/>	<input type="checkbox"/>

TEKS 7.12A

6. Leslie bought 5 drones to be delivered.

- Each drone cost \$99.99.
- Leslie paid \$46.52 for delivery.



What is the total amount Leslie paid?

Enter your answer in the box.

TEKS 7.3B

7. Patti has a bag of coins. The bag contains 5 dimes, 10 nickels, and 1 quarter. She will randomly select 2 coins from the bag one at a time without replacement. What is the probability Patti will select a nickel first and then a quarter?

- Ⓐ $\frac{1}{24}$
- Ⓑ $\frac{5}{8}$
- Ⓒ $\frac{5}{128}$
- Ⓓ $\frac{83}{120}$

TEKS 7.6I

26. Choose the correct answer from each drop-down menu to best describe π .

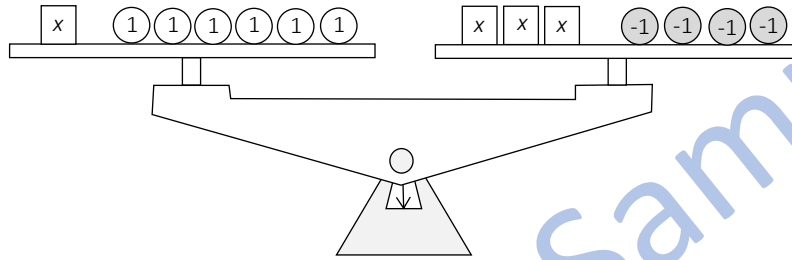
Pi (π) is the ratio of the _____ of a circle to its _____.

circumference
 square root

radius
 diameter

TEKS 7.5B

27. The model represents an equation.



What is the solution to this equation?

Enter your answer in the box.

TEKS 7.11A

28. Ms. Yang is creating a personal budget based on expenses shown in the table.

Ms. Yang's Monthly Expenses

Rent	\$1,200
Utilities	\$250
Medical Insurance	\$125
Student Loans	\$200
Food	\$250
Vehicle and Insurance	\$465
Savings Deposit	\$250
Miscellaneous	\$300
TOTAL EXPENSES:	

Ms. Yang works 160 hours each month. Choose the correct answer from each drop-down menu to best describe the hourly wages needed to meet this budget.

Ms. Yang must earn _____ per hour to _____ her monthly budget needs.

\$17.50
 \$19.00

meet
 exceed

TEKS 7.13D