This graph shows the relationship between the pounds of cheese bought at a deli and the total cost, in dollars, for the cheese.
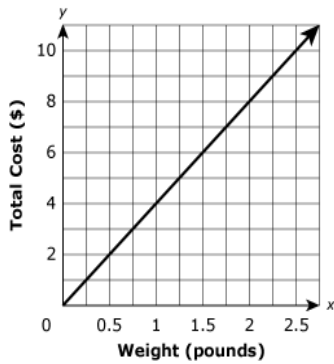
Select **each** statement about the graph that is true. Select **all** that apply.

- [ ] A. The point $(0,0)$ shows the cost is $0.00 for 0 pounds of cheese.

- [ ] B. The point $(0.25, 1)$ shows the cost is $0.25 for 1 pound of cheese.

- [ ] C. The point $(0.5, 2)$ shows that 0.5 pound of cheese costs $2.00.

- [ ] D. The point $(1, 4)$ shows the cost is $4.00 for 1 pound of cheese.

- [ ] E. The point $(2, 8)$ shows that 8 pounds of cheese cost $2.00.

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

This table shows a proportional relationship between x and y.

x	y
2	1.25
4	2.5
6	3.75
10	6.25

What is the constant of proportionality between x and y ? Enter your answer as a decimal.

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Which expressions are equivalent to $\frac{-5}{19}$?

Select **each** correct answer.

- [ ] A. $\frac{5}{19}$

- [ ] B. $-\frac{5}{19}$

- [ ] C. $\frac{-5}{-19}$

- [ ] D. $\frac{5}{-19}$

- [ ] E. $-\left(\frac{5}{19}\right)$

- [ ] F. $-\left(-\frac{5}{19}\right)$

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Hayden mixed 6 cups of blue paint with 8 cups of yellow paint to make green paint.

Write an equation that shows the relationship between the number of cups of blue paint, b, and the number of cups of yellow paint, y, that are needed to create the same shade of green paint. The equation should be in the form $b = ky$.

Enter your answer in the space provided. Enter **only** your equation.

▸ Numbers
▸ Arithmetic and Units
▸ Exponents and Roots
▸ Relations
▸ Geometry
▸ Groups

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

In which situation could the quotient of $-24 \div 3$ be used to answer the question?

○ A. The temperature of a substance decreased by 24° per minute for 3 minutes. What was the overall change of the temperature of the substance?

○ B. A football team loses 24 yards on one play, then gains 3 yards on the next play. How many total yards did the team gain on the two plays?

○ C. Julia withdrew a total of $24 from her bank account over 3 days. She withdrew the same amount each day. By how much did the amount in her bank account change each day?

○ D. A cookie jar contains 24 cookies. Each child receives 3 cookies. How many children are there?

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Two numbers, n and p are plotted on the number line shown.

$$n \qquad p$$

$$\leftarrow \quad \overset{\bullet}{|} \quad \overset{}{|} \ \overset{\bullet}{} \quad \overset{}{|} \quad \rightarrow$$
$$-1 \qquad 0 \qquad 1$$
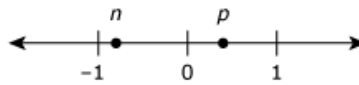
The numbers $n - p$, $n + p$, and $p - n$ will be plotted on the number line.

Select an expression from each drop-down menu to make this statement true.

The number with the least value is [Choose... ▾] , and the number with the greatest value is

[Choose... ▾] .

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Which expressions are equivalent to $3\frac{1}{4} - \left(-\frac{5}{8}\right)$?

Select **all** that apply.

☐ A. $3\frac{1}{4} - \left(\frac{5}{8}\right)$

☐ B. $3\frac{1}{4} + \left(\frac{5}{8}\right)$

☐ C. $3\frac{1}{4} + \left(-\frac{5}{8}\right)$

☐ D. $3\frac{1}{4} + \left(+\frac{5}{8}\right)$

☐ E. $-3\frac{1}{4} + \left(-\frac{5}{8}\right)$
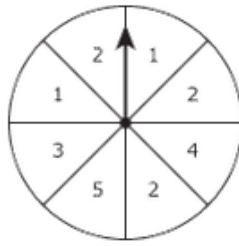
☐ F. $-3\frac{1}{4} + \left(+\frac{5}{8}\right)$

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

The spinner shown is divided into 8 equal sections.

The arrow on this spinner is spun once.

What is the probability that the arrow will land on a section labeled with a number **greater** than 3?

Enter your answer in the space provided. Enter **only** your fraction.

▸ Numbers
▸ Arithmetic and Units
▸ Exponents and Roots
▸ Relations
▸ Geometry
▸ Groups

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Rosy waxes $\frac{2}{3}$ of her car with $\frac{1}{4}$ bottle of car wax.

At this rate, what fraction of the bottle of car wax will Rosy use to wax her entire car?

Enter your answer in the space provided. Enter **only** your fraction.

| ⟳ | ↺ | ↻ | ⌫ | + | − | × | ÷ | ▤ | ▣ | y^x | √ | = | ≈ |

▸ Numbers

▸ Arithmetic and Units

▸ Exponents and Roots

▸ Relations

▸ Geometry

▸ Groups

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1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

The students in Naomi's class sold calendars for a fund-raiser this year and last year.

This year, the selling price of each calendar was $13.25.

The price this year represents 6% more than the selling price of each calendar last year.

Part A

What was the selling price of each calendar last year ?

Enter your answer in the box.

$ _____

Part B

The students in Naomi's class earned 20% of the selling price of each calendar sold this year and last year.

- At last year's selling price, Naomi's class sold 650 calendars.
- At this year's selling price, Naomi's class sold 600 calendars.

Select a choice from each drop-down menu to make this statement true.

The students in Naomi's class earned more money from the fund-raiser

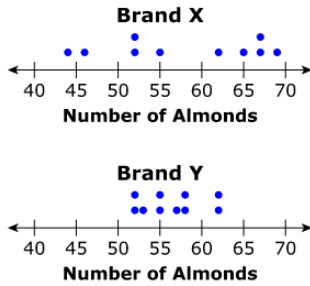| Choose...	by	Choose...
last year		$20
this year		$25
		$35
		$50
		$60

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Alexis chose a random sample of 10 jars of almonds from each of two different brands, X and Y. Each jar in the sample was the same size. She counted the number of almonds in each jar. Her results are shown in the plots.

Brand X

Number of Almonds

Brand Y

Number of Almonds

Based on the plots, which statement **best** compares the number of almonds in the jars from the two brands?

○ A. The number of almonds in jars from Brand X tends to be greater and more consistent than those from Brand Y.

○ B. The number of almonds in jars from Brand X tends to be greater and less consistent than those from Brand Y.

○ C. The number of almonds in jars from Brand X tends to be fewer and more consistent than those from Brand Y.

○ D. The number of almonds in jars from Brand X tends to be fewer and less consistent than those from Brand Y.

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

A store owner paid $15 for a book. She marked up the price of the book by 40% to determine its selling price.

Part A

What is the selling price of the book?

Enter your answer in the box.

$ [   ]

Part B

A customer buys a different book that has an original selling price of $38. The book is discounted 25%. The customer must pay a 6% sales tax on the discounted price of the book.

What is the total amount the customer pays for the discounted book?

Enter your answer in the box.

$ [   ]

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.

Josephine owns a diner that is open every day for breakfast, lunch, and dinner. She offers a regular menu and a menu with specials for each of the three meals. She wanted to estimate the percentage of her customers that order from the menu with specials. She selected a random sample of 50 customers who had lunch at her diner during a three-month period. She determined that 28% of these people ordered from the menu with specials.

Which statement about Josephine's sample is true?

○   A. The sample is the percentage of customers who order from the menu with specials.

○   B. The sample might not be representative of the population because it only included lunch customers.

○   C. The sample shows that exactly 28% of Josephine's customers order from the menu with specials.

○   D. No generalizations can be made from this sample, because the sample size of 50 is too small.

1. What do you know about the problem?

2. What questions do you have?

3. Explain your reasoning or thinking in solving the problem.