4.

What is the product of $\left(-\frac{3}{4}\right)$ and $\left(\frac{3}{4}\right)$?
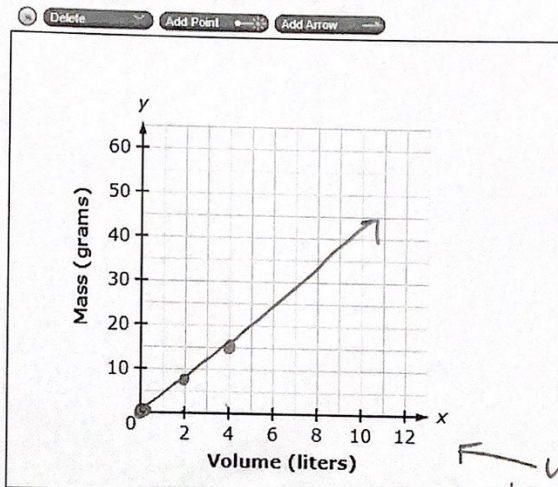
$$-\frac{9}{16}$$

2

Krypton is a chemical substance. Krypton has a constant of proportionality between its mass and volume. The constant of proportionality is 3.75 grams/liter.

$y = 3.75x$

$y = kx$
↑
constant

Use the Add Arrow tool to graph krypton's proportional relationship.

Delete | Add Point | Add Arrow

x	y
0	0
1	3.75
2	7.5
4	15

← use the graph to help. put these x #s into the equation

3. Melanie has a spinner and a deck of cards.

- The probability of spinning an even number on the spinner is $\frac{2}{5}$. 0.4 40%
- The probability of drawing an even number from the deck of cards is $\frac{5}{13}$. 38.5%

Complete the statement to compare the probabilities.

change fractions to decimals or percents to make it easier to compare

P(spinning an even number) is [___] P(drawing an even number card) because

2 < 5

5 < 13

$\frac{2}{5} > \frac{5}{13}$ (circled)

$\frac{2}{5} < \frac{5}{13}$

$\frac{2}{5} = \frac{5}{13}$

Equal to

Less than

Greater than (circled)

4. A school holds an election for class president. The percentage of votes received by Taylor, Alex, and Cameron are shown in the circle graph.

School Votes

Alex 29%

Taylor

Cameron 19%
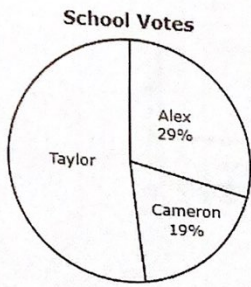
$29 + 19 = 48$

$100 - 48 = 52$

What percentage of the votes did Taylor receive?

Ⓐ 48%

Ⓑ 52% ⟵ (circled)

Ⓒ 71%

Ⓓ 81%

5. Match the equivalent expressions.

	3m + 4	5m + 4
2 (m + 3) + m − 2	☑	☐
5 (m + 1) − 1	☐	☑
m + m + m + 1 + 3	☑	☐

$2(m+3)+m-2$
$2m+6+m-2$
$3m+4$

$5(m+1)-1$
$5m+5-1$
$5m+4$

$m+m+m+1+3$
$3m+4$

6. An inequality is shown.

$-4p > -60$

$-4p > -60$
$\div -4$
$p < 15$

*If you • or ÷ by a neg. flip symbol

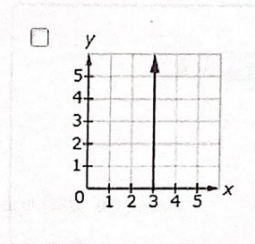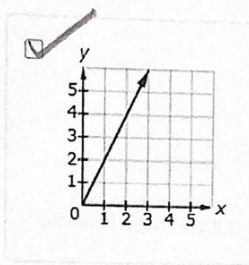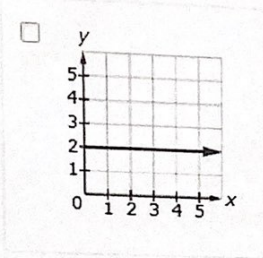Select the inequality symbol and enter a value to represent the solution to the inequality.

p [⬍] 15

< (circled)

>

7. Select all the representations that show a proportional relationship between x and y.

goes thru origin (0,0)

[ ] (graph: horizontal line/ray going right)

[✓] (graph: line through origin with positive slope)

[ ] (graph: vertical line)

check if there is a constant $y \div x$

[ ]
x	y
0	0
2	4	2
4	16	4	no
6	36	6

[✓]
x	y
0	0
2	8	4
4	16	4
6	24	4

This question has **two** parts.

*key word that
the variable goes w/ this #*

Omar uses a laser printer that prints ⟨30 pages per minute.⟩ On Monday, he prints 8 pages. On Tuesday, he prints more pages. Omar prints a total of 143 pages on Monday and Tuesday. Let m be the amount of time, in minutes, he spends printing on Tuesday.

Part A
Create an equation using m to model the amount of time Omar spends printing on Tuesday.

$$30m + 8 = 143$$

Part B
How many minutes does it take Omar to print the pages on Tuesday?

$$4.5$$

$$30m + 8 = 143$$
$$ - 8$$
$$30m = 135$$
$$ \div 30$$
$$m = 4.5$$

8.

Bill makes an error when evaluating the expression shown.

$$\left(\frac{(2)^3 \cdot (2)^5}{2^4}\right)^3 \qquad \left(\frac{2^8}{2^4}\right)^3$$

[handwritten, top right] • add exp) multiply — subtract

Part A

Click on the step in the first column of the table where Bill's error first appears.

Given	$\left(\dfrac{(2)^3 \cdot (2)^5}{2^4}\right)^3$
Step 1	$\left(\dfrac{2^8}{2^4}\right)^3$
Step 2	$(2^2)^3$
Step 3	2^6
Step 4	64

[handwritten] add exp.
$\left(\frac{2^8}{2^4}\right)^3$

$(2^4)^3$ He divided exponents

2^{12}

Part B

What is the correct value of the expression $\left(\dfrac{(2)^3 \cdot (2)^5}{2^4}\right)^3$?

[handwritten answer] 4096

---

10. A spinner is divided into 4 equally sized sections. The sections are blue, green, red, and yellow. The results of 1000 spins are shown in the table.

[handwritten] total

Results

Color	Frequency
Blue	470
Green	254
Red	144
Yellow	132

[handwritten]
theo: $\dfrac{1 \text{ green on spinner}}{4 \text{ total colors}} = 25\%$

exp: $\dfrac{254}{1000} = 25.4\%$

Jeffrey claims that of the four colors, the experimental probability of spinning green is closest to its theoretical probability.

Complete the statement to evaluate Jeffrey's claim, then enter the theoretical probability of spinning green.

Based on the results, Jeffrey's claim is [Is or is not] because the experimental probability of the spinner arrow stopping on green [True or false] the closest of the four colors to the theoretical probability.

The theoretical probability of spinning green is [25%]. *[handwritten]* 25%