

Final Exam is on Tuesday, June 13 & Wednesday, June 14.

1. Ines and Emma go to Applebee's for lunch. Their bill came to \$43.75. They want to leave an 18% tip. What will be the total amount they pay?

$$\begin{aligned} \text{w/ tip} &= 1.18(43.75) \\ &= \$51.63 \end{aligned}$$

- A \$51.62
- B \$7.88
- C \$51.63**
- D \$35.88

2. Olivia wants to buy a ticket to the Mets game. The regular price of each ticket is \$81. If she receives a discount of 5%, and is then charged 8.125% sales tax, how much will she pay for the ticket? Show your work.

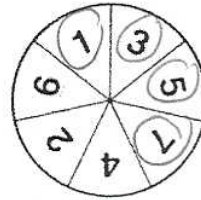
$$\begin{aligned} \text{price w/ discount} &= 0.95(81) \\ &= 76.95 \end{aligned}$$

$$\begin{aligned} \text{w/ tax} &= 1.08125(76.95) \\ &= \$83.20 \end{aligned}$$

3. The BMS boy's lacrosse team scored 58 goals last season. This season the team scored 71 goals. Determine the percent change in the number of goals scored to the nearest tenth. Show your work.

$$\begin{aligned} \text{orig: } 58 & \text{ } \text{diff } 13 \\ \text{new: } 71 & \text{ } \\ \frac{\text{diff}}{\text{orig}} &= \frac{13}{58} = 22.4\% \end{aligned}$$

4. What is the probability of spinning an odd number on the spinner, and then an even number on the number cube?



$$\begin{aligned} P(\text{odd}) \cdot P(\text{even}) \\ \frac{4}{7} \cdot \frac{3}{6} &= \frac{12}{42} \\ &= \frac{2}{7} \end{aligned}$$

- A $\frac{1}{42}$
- B $\frac{2}{21}$
- C $\frac{1}{21}$
- D $\frac{2}{7}$**

5. Mr. Burmeister's gumball machine has 8 red, 5 yellow, 3 green, 5 purple, and 4 blue gumballs. What is the probability of randomly selecting a yellow gumball and then a red gumball without replacement?

$$\begin{aligned} \text{total } 25 \\ P(Y) \cdot P(R) \\ \frac{5}{25} \cdot \frac{8}{24} &= \frac{1}{15} \end{aligned}$$

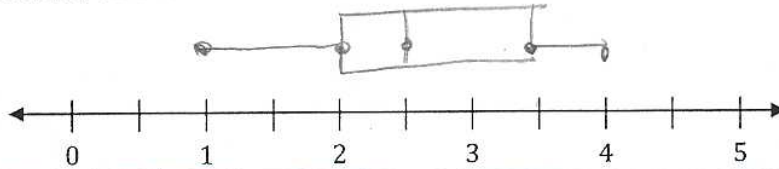
- A $\frac{1}{15}$**
- B $\frac{8}{125}$
- C $\frac{1}{6}$
- D $\frac{1}{8}$

6. Marian collected data on the number of hours she practiced tumbling on Sunday through Thursday nights for a period of 2 weeks. The data are shown in the table below.

$min = 1$
 $Q1 = 2$
 $med = 2.5$
 $Q3 = 3.5$
 $max = 4$

	Sun	Mon	Tues	Wed	Thurs
Week 1	4	2	3.5	1	2
Week 2	4	2.5	2.5	3	1.5

Construct a box-plot for these values.



Lee graphed the linear equation shown to the right. Use this graph to answer questions #7 & #8.

7. What is the slope type of Lee's line?

A Positive

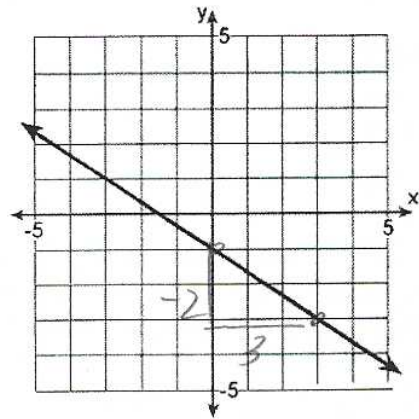
C Negative

B Zero

D Undefined

8. Write the equation of Lee's line.

$m = -\frac{2}{3}$
 $b = (0, -1)$
 $y = -\frac{2}{3}x - 1$



9. Jennifer graphs a linear equation that passes through the points $(-10, 6)$ and $(2, 12)$. Determine the equation of her line.

$m = \frac{\Delta y}{\Delta x}$
 $m = \frac{6}{12}$
 $m = \frac{1}{2}$

$y = mx + b$
 $12 = \frac{1}{2}(2) + b$
 $12 = 1 + b$
 $11 = b$

Equation $y = \frac{1}{2}x + 11$

10. Solve for y, and then graph the equation.

$5y - 8x = 12x + 5$
 $+8x + 8x$
 $5y = 20x + 5$
 $y = 4x + 1$
 $m = \frac{4}{1} \quad b = (0, 1)$

