

Name _____

Math 7 Honors

Date _____

Final Exam Review #4

Final Exam – Monday, June 18th (8:00 am)

Directions: Show your work. You may use a calculator.

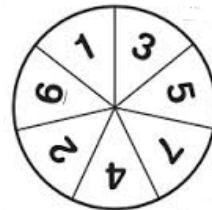
1. Olivia and Hope go to Applebee's for lunch. Their bill came to \$43.75. They want to leave an 18% tip. What will be the total amount they pay?

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

2. Taylor 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.*

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.*

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



- 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?

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

6. Simplify the following expression.

$$\frac{4e^8 \cdot 5e}{10e^2}$$

- A $2e^7$
- B $10e^6$
- C $10e^7$
- D $2e$

7. Simplify the following expression.

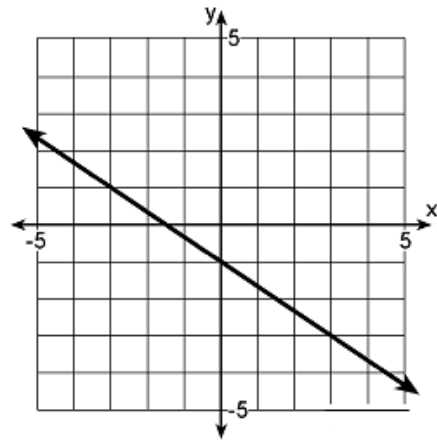
$$7w^3x^5 \cdot 3w^2x$$

Gabe graphed the linear equation shown to the right. Use this graph to answer questions #8 & #9.

8. What is the slope type of Gabe's line?

- A Positive
- B Zero
- C Negative
- D Undefined

9. Write the equation of Gabe's line.

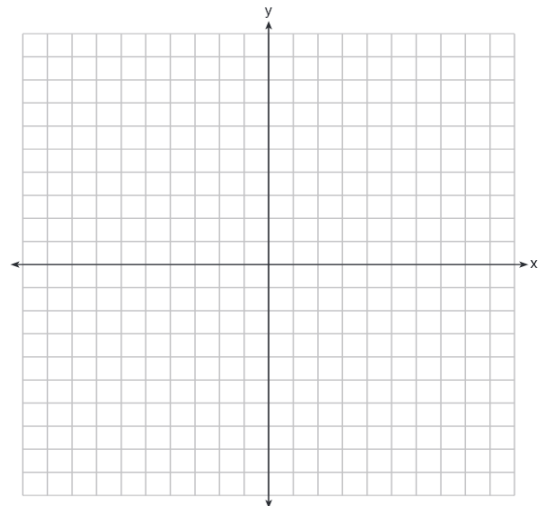


10. Jocelyn graphs a linear equation that passes through the points $(-10, 6)$ and $(2, 12)$. Determine the equation of her line. *Show your work.*

Equation _____

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

$$5y - 8x = 12x + 5$$



12. Mitch tosses a pair of six-sided number cubes. The top faces of the number cubes are shown. Find the probability of getting these results with the number cubes.



A $\frac{2}{7}$

C $\frac{1}{36}$

B $\frac{1}{6}$

D $\frac{1}{9}$

13. Nora has 4 quarters, 3 dimes, and 3 pennies in her pocket. She randomly chooses a coin from her pocket and does not replace it. She then chooses a second coin. What is the probability that she selects a quarter and then a dime?

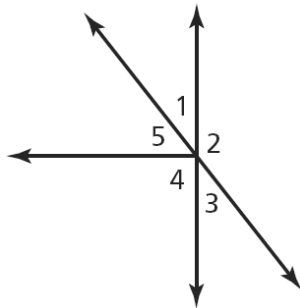
A $\frac{1}{5}$

C $\frac{2}{15}$

B $\frac{3}{25}$

D $\frac{7}{19}$

14. Use the diagram below to answer the following questions.



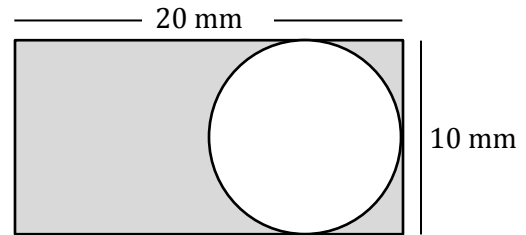
Which pair of angles are considered supplementary? \sphericalangle _____ and \sphericalangle _____

Which pair of angles are considered complementary? \sphericalangle _____ and \sphericalangle _____

Which pair of angles are congruent?
 \sphericalangle _____ and \sphericalangle _____

Explain how you determined your answer.

15. Gavin drew a circle to match the width of a rectangle. Determine the area of the shaded region. ($A = \pi r^2$)



Part A Write your answer *in terms of π* .
 Show your work.

Answer _____ mm^2

Part B Determine the area *to the nearest tenth*.

Answer _____ mm^2

16. A pair of complementary angles have measures of $(8r + 9)$ and $(7r + 6)$. Determine the measure of the larger angle. *Show your work.*

17. Justin is conducting a probability experiment that involves flipping a quarter, flipping a penny, and rolling a number cube. What is the probability that both coins land on heads, and he also rolls an odd number?



A $\frac{1}{12}$

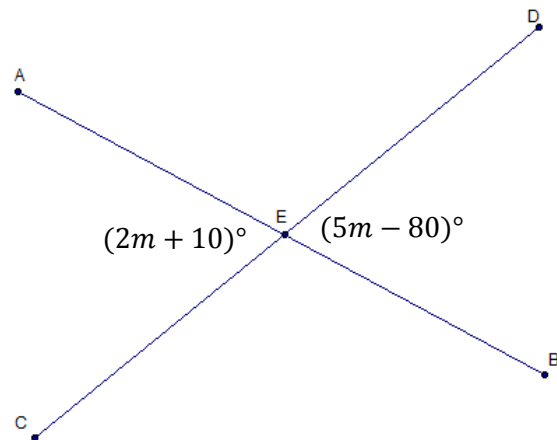
B $\frac{3}{8}$

C $\frac{1}{6}$

D $\frac{1}{8}$

18. The diagram below shows the intersection of two lines.

Part A Determine the value of m .
Show your work.



Answer _____

Part B Find the measure of angle AED.
Show your work.

Answer _____ degrees