| Elementary Statistics | Name: |
| Study Guide 1 | Class: |
| Due Date: | Score: |

**Be Neat, Organized, and No Work $\Leftrightarrow$ No Points**

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1. **(2 points)** Write $\dfrac{405}{750}$ in reduced fraction.

1. _____

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2. **(2 points)** Write $0.25\%$ in reduced fraction.

2. _____

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3. **(2 points)** Write $2.5 \times 10^{-6}$ in standard notation.

3. _____

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4. **(2 points)** Write $0.00000000000000625$ in scientific notation.

4. _____

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5. **(3 points)** In a survey of $1400$ people at a local mall, $65\%$ of them use a certain brand of shampoo. How many of them use that brand of shampoo?

5. _____

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6. **(3 points)** In a survey of $1250$ shopper at a local mall, $1000$ of them had a smart phone. What percent of the shopper at that mall had a smart phone?

6. _____

7. **Use your calculator to evaluate**

   (a) **(2 points)** $8 + 10 + 9 + 11 + 7 + 15$

                             (a) _____

   (b) **(2 points)** $8^2 + 10^2 + 9^2 + 11^2 + 7^2 + 15^2$

                             (b) _____

   (c) **(2 points)** $\dfrac{8(288) - (48)^2}{8(8-1)}$

                             (c) _____

   (d) **(2 points)** $\dfrac{\frac{72-80}{10}}{\sqrt{16}}$. **Round your answer to three-decimal places.**

                             (d) _____

   (e) **(2 points)** $120 \cdot (0.8)^3 \cdot (0.2)^7$. **Round your answer in scientific notation.**

                             (e) _____

   (f) **(2 points)** $\dfrac{0.658 - (-0.438)}{2}$. **Round your answer to three-decimal places.**

                             (f) _____

   (g) **(2 points)** $1.645 \cdot \sqrt{\dfrac{0.8 \cdot 0.2}{64}}$. **Round your answer to two-decimal places.**

                             (g) _____

8. **Consider a standard deck of playing cards,**

   (a) **(1 point)** How many are red cards?

                             (a) _____

   (b) **(1 point)** How many face cards?

                             (b) _____

   (c) **(1 point)** How many red aces?

                             (c) _____

9. Consider a standard deck of playing cards, rounding to the nearest whole percent,

   (a) **(2 points)** what percent of cards are red cards?

                                                           (a) _____

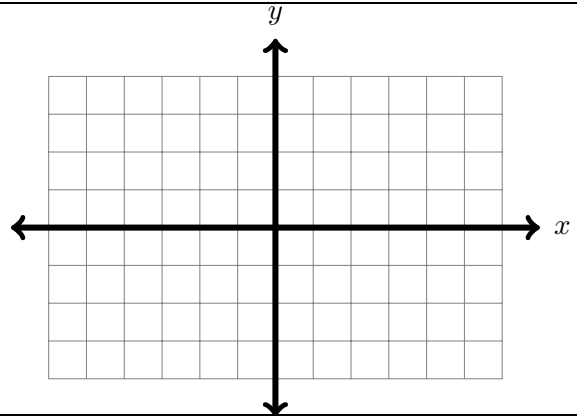   (b) **(2 points)** what percent of cards are face cards?

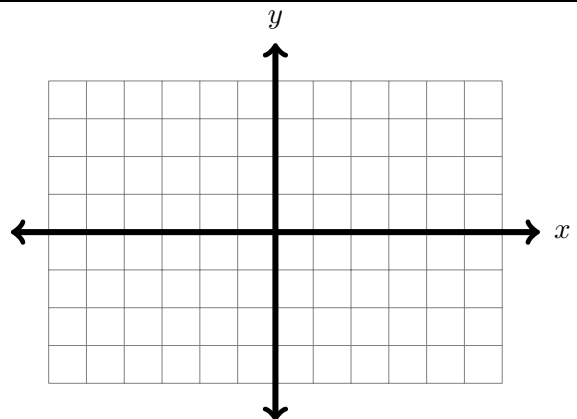                                                           (b) _____

10. Use $y = 2.5x + 65$ to

   (a) **(2 points)** find $y$ when $x = 8$.

                                                           (a) _____

   (b) **(2 points)** find $x$ when $y = 75$.

                                                           (b) _____

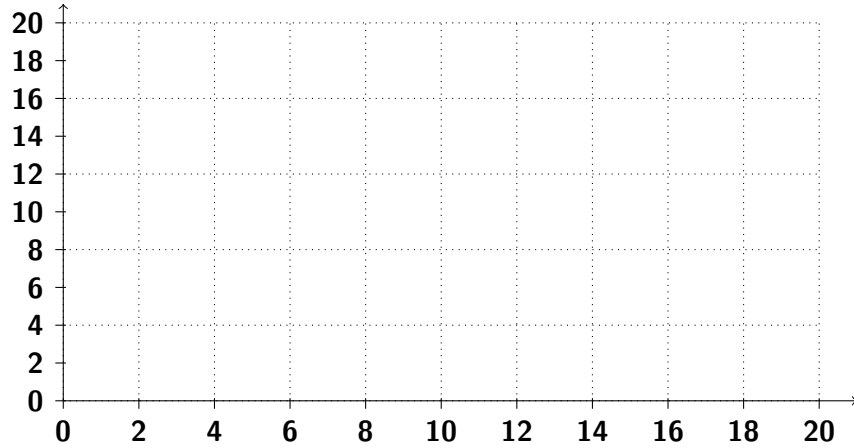11. **(2 points)** Draw the line $3x - 4y = 12$.

12. **(2 points)** Draw the line $y = -\dfrac{3}{4}x + 3$.

**13.** Consider the following points below:

$(0, 2), (6, 8), (6, 10), (2, 6), (4, 4), (10, 8), (8, 12), (6, 4), (14, 8), (16, 12), (18, 10), (14, 10), (20, 12)$

    **(a) (2 points)** Plot and label each point, then draw the line that contains $(0, 2)$ and $(20, 12)$ .



    **(b) (2 points)** Find the equation of the line drawn above in $y = mx + b$ form.

(b) _____

**14. (3 points)** In a survey of $75$ **LA residents,** $24$ **of them were fans of the LA Lakers and the LA Dodgers while** $15$ **of them were not a fan of either team. The number of only LA Lakers fans was the same as the number of only LA Dodgers fans. Use this information to construct the Venn Diagram for the number of fans that belong to each region.**



LA Dodgers      LA Lakers
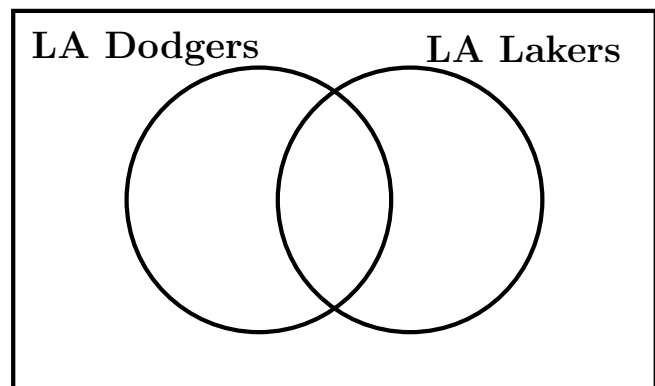
*Students generally do better when they study with classmates.*