$\qquad$

## SHOW ALL WORK to receive full credit.

Complete the diamond problems. (2 points each)


Simplify the following expressions using positive and negative integers. (2 points each)
3. $\begin{array}{r}10 x \\ -14 x \\ \hline\end{array}$

4. | -2 |
| :---: |
| +13 |
5. $5 x-8-2 x+11$
6. $-3 x+7-20 x-12$
7. $-4(5+3 x)+8$
8. $2(-7 x+3)-(-9+5 x)$

Use the percent Formula $\frac{\text { is }}{\text { of }}=\frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. (2 points each)
9. 20 is $\qquad$ $\%$ of 80
10. $75 \%$ of 60 is $\qquad$
11. 120 out of 200 is $\qquad$ \%
12. $60 \%$ of $\qquad$ $=30$

Complete the following without the use of a table, but still think of the mental percents to help you. (3 points each)
13. What is $45 \%$ of $\$ 1,800.00$ ? $\qquad$ 14. What is $60 \%$ of $\$ 75.00$ ? $\qquad$

Answer each of the following applications to Mental Percents questions. Answers must be rounded to the nearest cent (hundredths). (4 points each)
15. Mr. Loken wanted to buy some Halloween candy for the trick-or-treaters in his neighborhood. He found a candy sale at Rite Aid for $30 \%$ off the regular price of $\$ 5.00$ per bag. If he bought 8 bags of candy, what was the total cost of his candy purchase?

Total Original Price for 8 Bags: $\qquad$
Amount of Discount for 8 bags: $\qquad$
Sales Price for 8 Bags: $\qquad$
16. The Halloween Party Store in Folsom had all of their costumes on sale for $80 \%$ off since it is after Halloween. You want to purchase a costume of the Grim Reaper that was originally priced for $\$ 75.00$. How much will you have to pay for the costume?

Discount for the costume: $\qquad$
Sale price for the costume: $\qquad$

Solve the following equations. (3 points each)
17. $2 x-14-4 x=-11-3 x$
18. $4-(5 x+6)-3=-30$
19. $2(3 x-5)+4 x=4(x+3)-(x+1)$
20. $\frac{15}{2 x-10}=\frac{1}{2}$
$\qquad$

## SHOW ALL WORK to receive full credit.

## Complete the diamond problems. (2 points each)

1. 


2.


Simplify the following expressions using positive and negative integers. (2 points each)
3. $\begin{array}{r}-8 x \\ 12 x \\ \hline\end{array}$
6. $-3 x+7-10 x+15$
7. $-7(8-3 x)+8$
4. $\begin{array}{r}-5 \\ +13 \\ \hline\end{array}$
5. $5 x+8-12 x+1$
8. $2(-7 x+3)-(6-5 x)$

Use the percent Formula $\frac{\text { is }}{\text { of }}=\frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. ( 2 points each)
9. 12 is $\qquad$ $\%$ of 300
10. $44 \%$ of 75 is $\qquad$
11. 126 out of 150 is $\qquad$ \%
12. $5 \%$ of $\qquad$ $=6$

Find the percent of increase or decrease. Round \% to the nearest tenth if necessary. (3 points each)
13. Last year the price of ticket for the River Cats game was $\$ 15.00$. This year they are selling the same ticket for $\$ 12.00$. Is this an increase or decrease? $\qquad$ How much? $\qquad$

What is the percent of increase or decrease? $\qquad$
14. Last month the cost of a Venti, peppermint mocha java chip frappuccino with whip cream on the bottom and top, blended twice with chocolate and sprinkles sold for $\$ 4.65$. This month they cost $\$ 4.95$. What is the percent of increase or decrease?
Is this an increase or decrease? $\qquad$ How much? $\qquad$

What is the percent of increase or decrease?

Answer each of the following applications to Mental Percents questions. Answers must be rounded to the nearest cent (hundredths). (4 points each)
15. The day after Halloween, Mr. Loken wanted to buy some candy for the trick-or-treaters next year. He found a candy sale at Walgreens for $60 \%$ off the regular price of $\$ 5.00$ per bag. If he bought 20 bags of candy, what was the total cost of his candy purchase?

Total Original Price for 20 Bags: $\qquad$
Amount of Discount for 20 bags: $\qquad$
Sales Price for 20 Bags: $\qquad$
16. Best Buy had all their cell phone accessories on sale for $25 \%$ off. Victoria bought a car charger marked $\$ 25.00$, and a case marked $\$ 18.00$. How much will you have to pay for the cell phone accessories?

Total cost before discount: $\qquad$
Total discount: $\qquad$
Total sale price : $\qquad$

Solve the following equations. (3 points each)
17. $2 x+15=43-5 x$
18. $\frac{x+2}{4}=\frac{-2 x-5}{-7}$
19. $-c-5-13 c+10=6 c-66-30 c-9$
20. $-8=7(5-y)-3(-6 y-4)$

## SHOW ALL WORK to receive full credit.

Simplify the following expressions using positive and negative integers. (2 points each)

1. $\begin{array}{r}-15 x \\ +2 x \\ \hline\end{array}$
2. | -15 |
| :--- |
| -3 |
3. $-13 x+7-2 x+12$
4. $-5(5-3 x)+8$
5. $4(-3 x+3)-(9-5 x)$

Use the percent Formula $\frac{i s}{\text { of }}=\frac{\%}{100}$ to solve the following. Round money answers to the nearest cent (hundredth), all others to the nearest tenth. (2 points each)
7. 15 is $\qquad$ $\%$ of 60
8. 145 is $40 \%$ of $\qquad$
9. $80 \%$ of 30 is $\qquad$ 10. 54 is $\qquad$ $\%$ of 90

Complete the following without the use of a table, but still think of the mental percents to help you. (2 points each)
11. What is $11 \%$ of $\$ 650.00$ ? $\qquad$ 12. What is $75 \%$ of $\$ 125.00$ ? $\qquad$

Answer each of the following applications to Mental Percents questions. Answers must be rounded to the nearest cent (hundredths). (3 points)
13. Mr. Loken wanted to buy some cookies. He found some cookies on sale at Rite Aid for $25 \%$ off the regular price of $\$ 4.60$ per bag. If he bought 2 bags of cookies, what was the total cost of his purchase?

Total Original Price for 2 Bags: $\qquad$
Amount of Discount for 2 bags: $\qquad$
Sales Price for 2 Bags: $\qquad$
14. The Christmas store in Macy's had all of their ornaments marked down 20\%. If Mrs. Frost bought 5 ornaments that were originally priced at $\$ 5.60$, how much did she spend on the ornaments? (3 points)

Total Original Price for 5 ornaments: $\qquad$
Amount of Discount for 5 ornaments: $\qquad$
Sales Price for 5 ornaments: $\qquad$
Solve the following equations. (3 points each)
15. $3(x-4)=9$
16. $4-3(5-x)-2=-5(x+1)$
17. $2(x-5)-3(5 x+1)=4(2 x+4)+1-6 x$
18. $\frac{20}{2 x-10}=\frac{2}{3}$

Find the percent of increase or decrease. Round \% to the nearest tenth if necessary. (3 points each)
19. Gasoline prices decreased during the last two months. The price of a gallon of gas went from $\$ 4.00$ per gallon to $\$ 3.60$ per gallon. What is the percent of decrease on a gallon of gas?

Is this an increase or decrease? $\qquad$ How much? $\qquad$

What is the percent of increase or decrease? $\qquad$
20. Starbuck's raised their prices on their coffee drinks. The price of a tall Latte went from $\$ 2.15$ to $\$ 2.50$. What is the percent of increase?

Is this an increase or decrease? $\qquad$ How much? $\qquad$

What is the percent of increase or decrease? $\qquad$

