Fもくtars 日na Mree
（Objective：Reductm

## Day 1

## I．Commutative and Associative Properties

A．Use the Commutative Property to rewrite each expression in order to add more efficiently． Then determine the sum．
1． $95+19+5$
2．$\frac{1}{2}+\frac{3}{8}+\frac{3}{2}$

3． $0.1+3.93+2.9$
4． $35+17+105$

5．$\frac{3}{4}+6 \frac{1}{8}+\frac{3}{8}$
6． $5.04+8.35+1.16$

B．Use the Associative Property to rewrite each expression in order to add more efficiently． Then determine the sum．
1．$(29+17)+13$
2．$(18+75)+25$
3．$\left(\frac{1}{2}+\frac{4}{9}\right)+\frac{5}{9}$
4．$(2.2+1.01)+0.99$
5． $6.2+(0.8+2.54)$
6．$\frac{2}{5}+\left(\frac{8}{5}+\frac{1}{3}\right)$
C. Use the Commutative and Associative Properties to rewrite each expression in order to multiply more efficiently. Then determine the product.

1. $5 \times(19 \times 2)$
2. $20 \times(6 \times 2)$
3. $5 \times(18.5 \times 20)$
4. $\frac{1}{2} \times\left(\frac{13}{16} \times 2\right)$
5. $(1.25 \times 7) \times 4$
6. $\left(\frac{5}{8} \times \frac{1}{12}\right) \times 16$
D. Write an equivalent numeric expression for each using the Commutative and Associative Properties. Then determine the sum or product.
7. $7+6+3$
8. $5 \times 6 \times 4$
9. $2 \times 8 \times 3 \times 5$
10. $9+4+11+16$
11. $8 \times 2 \times 8$
12. $4+7+1+6+3$

## II. Exploring the Distributive Property with Numeric Expressions

A. Complete each to represent the shading in the model.
1.

$7 \times(4+3)=7 \times$ $\qquad$ $+7 \times$ $\qquad$

$$
\begin{aligned}
& =\_+21 \\
& =
\end{aligned}
$$

3. 



$$
\begin{aligned}
3 \times\left(\_+2\right) & =3 \times 6+\ldots \times 2 \\
& =-6 \\
& =
\end{aligned}
$$

5. 


$5 \times(6+3)=5 \times$ $\qquad$ $+5 \times$ $\qquad$

$$
\begin{aligned}
& =30+ \\
& =
\end{aligned}
$$

$$
=
$$

4. 


$\qquad$ $\times(3+8)=6 \times 3+$ $\qquad$ $\times 8$

$$
=\ldots+48
$$



$$
8 \times(5+4)=8 \times \ldots+8 \times
$$

$$
=40+
$$

$$
=
$$

$\qquad$
6.

$\qquad$ $\times(7+5)=4 \times$ $\qquad$ $+4 \times 5$

$$
=28+
$$

$$
=
$$

B. Identify the expression that shows a correct way to decompose each.

1. $10 \times 8$
a. $9(8+4)$
2. $9 \times 12$
b. $13(7+4)$
3. $13 \times 7$
c. $9(6+2)$
4. $9 \times 8$
d. $10(7+1)$
5. $12 \times 6$
e. $12(3 \times 3)$
6. $13 \times 11$
f. $10(4 \times 4)$
g. $13(3+4)$
h. $12(4+2)$
C. Match each expression to the equivalent addition expression.
7. $35+28$
a. $7 \times(8+6)$
8. $18+36$
b. $7 \times(2+11)$
9. $121+22$
c. $11 \times(11+2)$
10. $14+77$
d. $6 \times(3+6)$
11. $27+12$
e. $3 \times(9+4)$
12. $56+42$
f. $7 \times(5+4)$
D. Complete each equation.
13. $8 \times 12=8 \times\left(\_+10\right)$
14. $5 \times 14=5 \times(10+$ $\qquad$
15. $7 \times 13=7 \times\left(\_+10\right)$
16. $9 \times 11=9 \times\left(\_+1\right)$
17. $11 \times 15=11 \times\left(\_+10\right)$
18. $12 \times 12=12 \times(10+\square)$
III. Calculating Area of Various Figures
A. Calculate the area of each given figure.

19. 


4.

6.


