## SmartMäthz

## Evaluate Expressions

$\qquad$ Name: $\qquad$

## LET'S MAKE LEARNING FUN

1. Mark the expression(s) that give the same product as $6 \times \frac{3}{8}$. Explain how you did it.
(a.) $\frac{3}{8} \times 6$
(b.) $6 \times \frac{8}{3}$
(c.) $(8 \div 6) \times 3$
(d.) $\quad(6 \times 3) \div 8$
(e.) $3 \div 8 \times 6$
(f.) $8 \div(3 \times 6)$
2. Write an expression to match, and then evaluate.
(a.) $\frac{1}{8}$ the sum of 23 and 17 .
(b.) Subtract 4 from $\frac{1}{6}$ of 42 .
(c.) 7 times as much as the sum of $\frac{1}{3}$ and $\frac{4}{5}$.
(d.) $\frac{2}{3}$ of the product of $\frac{3}{8}$ and 16 .
(e.) 7 copies of the sum of 8 fifths and 4 .
(f.) $\quad 15$ times as much as 1 fifth of 12 .
3. Use $<,>$, or $=$ to make true number sentences without calculating. Explain your thought process.
a. $\frac{2}{3} \times(9+12)$ $\square$ $15 \times \frac{2}{3}$
b. $\left(3 \times \frac{5}{4}\right) \times \frac{3}{5} \square\left(3 \times \frac{5}{4}\right) \times \frac{3}{8}$
c. $\quad 6 \times\left(2+\frac{32}{16}\right) \square(6 \times 2)+\frac{32}{16}$

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## Evaluate Expressions

Grade 5 Algebra Answer Sheet

1. Mark the expression(s) that give the same product as $6 \times \frac{3}{8}$. Explain how you did it.
(a.) $\frac{3}{8} \times 6$
(b.) $6 \times \frac{8}{3}$
(c.) $(8 \div 6) \times 3$
(d.)
$(6 \times 3) \div 8$
(e.) $3 \div 8 \times 6$
(f.) $8 \div(3 \times 6)$

The explanations will vary.
2. Write an expression to match, and then evaluate.
(a.) $\frac{1}{8}$ the sum of 23 and 17 .

Answer
$\frac{1}{8} \times(23+17)=\frac{1}{8} \times(40)=\frac{1 \times 40}{8}=\frac{40}{8}=5$
(b.) Subtract 4 from $\frac{1}{6}$ of 42 .

## Answer

$\left(\frac{1}{6}\right.$ of 42$)-4=\left(\frac{1}{{ }_{1}} \times 42^{-7}\right)-4=(1 \times 7)-4=7-4=3$
(c.) 7 times as much as the sum of $\frac{1}{3}$ and $\frac{4}{5}$.

## Answer

$7 \times\left(\frac{1}{3}+\frac{4}{5}\right)=7 \times\left(\frac{5+12}{15}\right)=7 \times\left(\frac{17}{15}\right)=\frac{119}{15}=7 \frac{14}{15}$
(d.) $\frac{2}{3}$ of the product of $\frac{3}{8}$ and 16 .

## Answer

$$
\begin{aligned}
& \frac{2}{3} \times\left(\frac{3}{8} \times \frac{16}{1}\right)=\frac{2}{3} \times\left(\frac{3}{1} \times \frac{16^{2}}{1}\right)=\frac{2}{3} \times\left(\frac{3 \times 2}{1 \times 1}\right) \\
& =\frac{2}{3} \times \frac{6}{1}=\frac{2}{{ }^{1}} \times \frac{6^{2}}{1}=\frac{2 \times 2}{1 \times 1}=\frac{4}{1}=4
\end{aligned}
$$

(e.) 7 copies of the sum of 8 fifths and 4 .

## Answer

$7 \times\left(\frac{8}{5}+\frac{4}{1}\right)=7 \times\left(\frac{8+20}{5}\right)=7 \times\left(\frac{28}{5}\right)=\frac{7 \times 28}{5}=\frac{96}{5}=19 \frac{1}{5}$
(f.) $\quad 15$ times as much as 1 fifth of 12 .

## Answer

$15 \times\left(\frac{1}{5}\right.$ of 12$)=15 \times\left(\frac{1}{5} \times 12\right)=\frac{15}{1} \times \frac{12}{5}$
$=\frac{15^{5^{3}}}{1} \times \frac{12}{\not 5^{1}}=\frac{3 \times 12}{1 \times 1}=\frac{36}{1}=36$
3. Use $<,>$, or $=$ to make true number sentences without calculating. Explain your thought process.
a. $\quad \frac{2}{3} \times(9+12) \quad>\quad 15 \times \frac{2}{3}$
b. $\left(3 \times \frac{5}{4}\right) \times \frac{3}{5} \square\left(3 \times \frac{5}{4}\right) \times \frac{3}{8}$
c. $\quad 6 \times\left(2+\frac{32}{16}\right)>(6 \times 2)+\frac{32}{16}$

## The explanations will vary.

