

Grade 5 Algebra Worksheet Date:

Name:

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.)	$(6 \times 3) \div 8$	(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.
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(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.) 15 times as much as 1 fifth of 12.
- 3. Use <, >, or = to make true number sentences without calculating. Explain your thought process.

a.
$$\frac{2}{3} \times (9+12)$$
 $15 \times \frac{2}{3}$
b. $\left(3 \times \frac{5}{4}\right) \times \frac{3}{5}$ $\left(3 \times \frac{5}{4}\right) \times \frac{3}{8}$
c. $6 \times \left(2 + \frac{32}{16}\right)$ $(6 \times 2) + \frac{32}{16}$



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.



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

$$\left(\frac{1}{6} \text{ of } 42\right) - 4 = \left(\frac{1}{6} \times 42^{7}\right) - 4 = (1 \times 7) - 4 = 7 - 4 = 3$$

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

(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.) 15 times as much as 1 fifth of 12.

Answer

$$15 \times \left(\frac{1}{5} \text{ of } 12\right) = 15 \times \left(\frac{1}{5} \times 12\right) = \frac{15}{1} \times \frac{12}{5}$$

 $= \frac{15}{1} \times \frac{12}{5}^{3} = \frac{3 \times 12}{1 \times 1} = \frac{36}{1} = 36$

3. Use <, >, or = to make true number sentences without calculating. Explain your thought process.

a.
$$\frac{2}{3} \times (9+12)$$
 > $15 \times \frac{2}{3}$
b. $\left(3 \times \frac{5}{4}\right) \times \frac{3}{5}$ > $\left(3 \times \frac{5}{4}\right) \times \frac{3}{8}$
c. $6 \times \left(2 + \frac{32}{16}\right)$ > $(6 \times 2) + \frac{32}{16}$

The explanations will vary.