

simple fraction $\frac{a}{b}$ $a + b$ are integers

$$5) \quad \frac{1}{7} \times \frac{5}{b_2} = \frac{5}{14}$$

$$b \neq 0$$

$$12) \quad 2\frac{1}{2} \div 1\frac{1}{4}$$

$$\frac{5}{2} \div \frac{5}{4}$$

$$\frac{1}{1} \frac{8}{2} \cdot \frac{4}{5} = 2$$

$$8) \quad 3\frac{1}{4} \cdot 8\frac{2}{3}$$

$$\frac{13}{4} \cdot \frac{26}{3} = \frac{169}{6}$$

$$10) \quad \frac{4}{1} \div \frac{1}{5}$$

$$\frac{4}{1} \cdot \frac{5}{1} = 20$$

$$1) \quad 2\frac{1}{3} + \frac{1}{2}$$

$$\frac{2}{2} \cdot \frac{7}{3} + \frac{1}{2} \cdot \frac{3}{3}$$

$$\frac{14}{6} + \frac{3}{6} = \frac{17}{6}$$

1-1 Variables and Expressions

Notes:

variables: symbols that are used to represent unspecified numbers

algebraic expression: consists of one or more numbers and variables
along with one or more arithmetic operations

power: X^n

factors: quantities being multiplied

product: the result of multiplication

evaluate: to find the value of the expression

Examples:

1. Write an algebraic expression for each verbal expression

a. three times a number x , subtracted from 24

$$24 - 3x$$

b. five greater than half of a number t .

$$5 + \frac{1}{2}t$$

2. Write a verbal expression for each algebraic expression

a. $(3 + b) \div y$

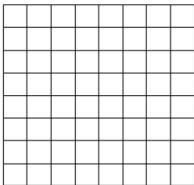
the sum of $3 + b$ divided by a
number y
3 plus b , divided by y

b. $5y + 10x$

10 times x added to
5 times y

3. Write a power that represents the number of smallest squares in the large square.

$$8^2$$



4. Evaluate 3^4 .

$$= 3 \cdot 3 \cdot 3 \cdot 3$$
$$= 9 \cdot 9$$
$$= 81$$

Your turn!

1. Write an algebraic expression for each verbal expression.

a. m increased by five $m+5$

b. the difference of x and nine $x-9$

c. seven times the product of x and t $7xt$

2. Write two different verbal expressions for each algebraic expression.

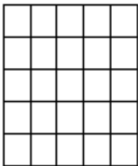
a. $9n$ the product of 9 and n

b. $8+a$ the sum of 8 and a

c. $7-3y$ the difference of 7 and the product of 3 and y

3. Write a power that represents the number of small squares in the large square.

$$5^2$$



4. Evaluate each expression.

a. $3^5 = 3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 = 243$

b. $5^3 = 5 \cdot 5 \cdot 5 = 125$

