

20. Variables and Real-World Problems

Variables Describe the Real World

Use a **variable** to represent an unknown → Write an **expression** → Substitute and evaluate

a)

A box contains n pencils. Buy 3 boxes.

Expression $3n$

Substitute When $n = 12 \rightarrow 3 \times 12 = 36$ pencils

b)

Tom is x years old. His mom is 25 years older than Tom.

Expression

Substitute When $x =$ $\rightarrow$ Mom is years old

c)

An apple costs y dollars. Buy 5 apples.

Expression

Substitute When $y =$ $\rightarrow$ Total dollars

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d)

A rectangle has length a and width b .

Perimeter

Area

Substitute

When $a =$, $b =$ $\rightarrow$ Area =

e)

Store sale: Original price p dollars, 20% off.

Expression

Substitute

When $p =$ $\rightarrow$ Sale price dollars

Substitute

Buy 3 items, total dollars

f)

You are years old. Your dad is years older than you.

Expression

Dad's age =

Substitute

You are , dad is years older $\rightarrow$ Dad is years old