

TIMSS 2019 – Restricted Use Items – Algebra

Benchmark 3

Applying

The stopping distance (d) meters depends on the speed (v) meters per second of the car when the brakes are applied. A formula for calculating this distance is:

$$d = \frac{2v + v^2}{20}$$

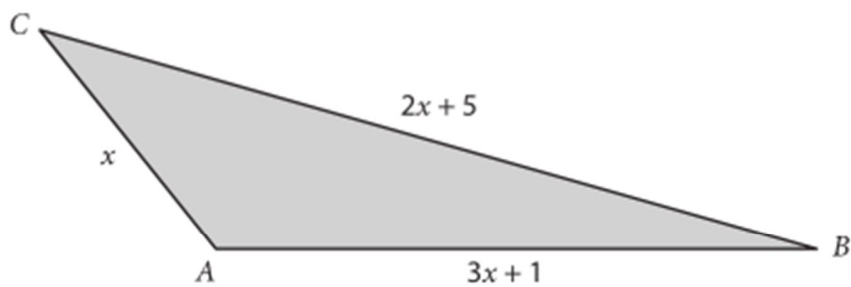
What is the stopping distance when $v = 20$?

$d =$ _____ m

Benchmark 4

Applying

The perimeter of triangle ABC is 21 cm.



What is the value of x ?

$x =$ _____ cm

Applying

Roy buys cell phones for x zeds each and sells them to make a profit. He determines his selling price for each phone, y zeds, by doubling the price he paid and subtracting 3 zeds.

Write an equation that shows y in terms of x .

Equation: _____