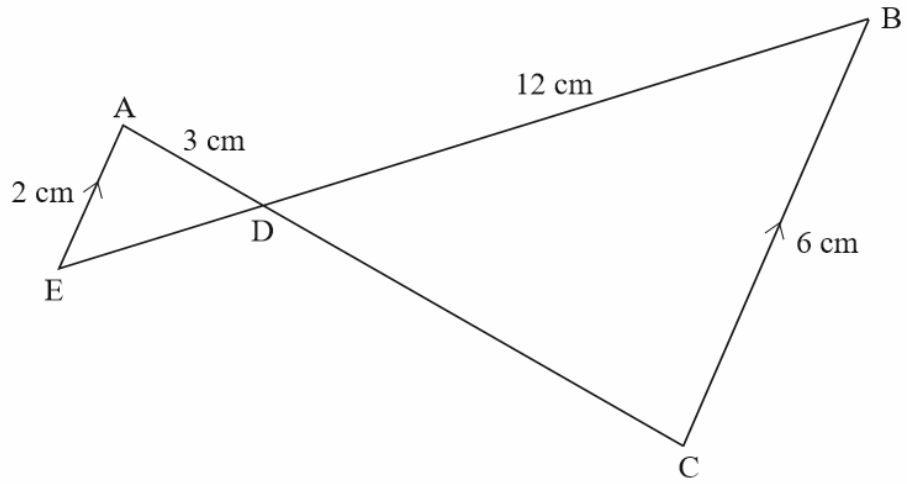
Geometry
Daily Quiz 10082019

Question 1.

In the following diagram, the sides A E and B C are parallel.

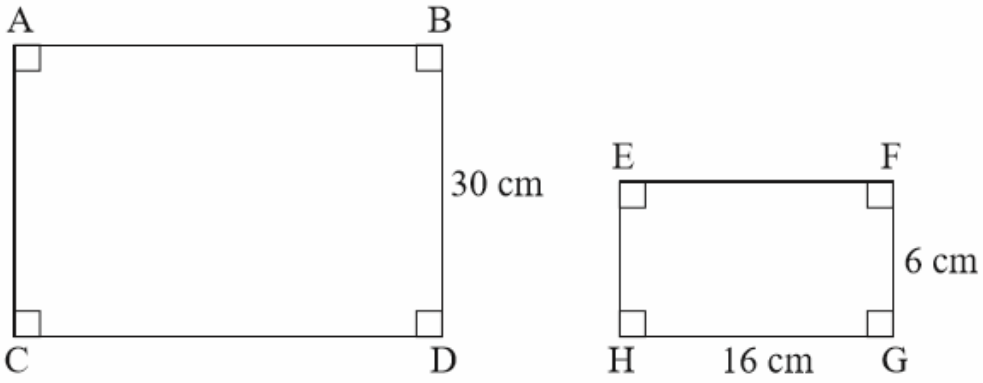


(a) Explain why A D E and C D B are similar triangles.

(b) Calculate the lengths D E and C D.

Question 2.

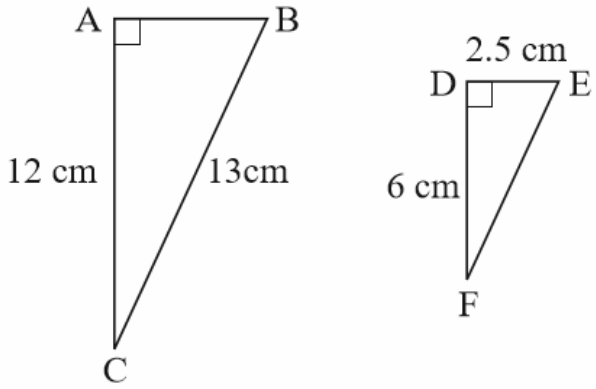
The following diagram shows two similar rectangles:



Determine th length of the side AB.

Question 3.

The following diagram shows two similar triangles:



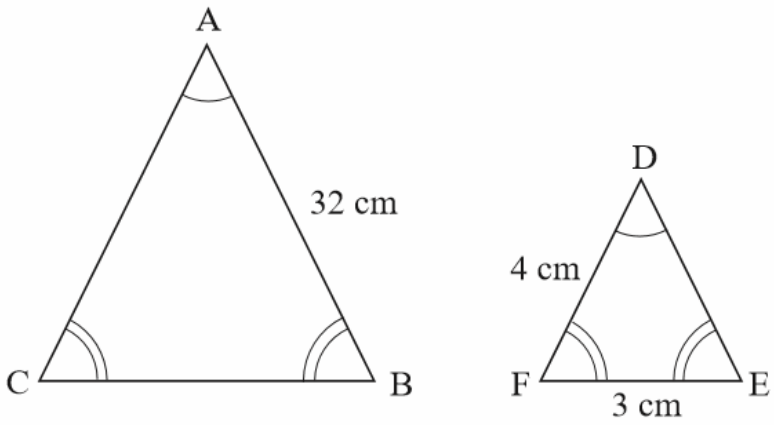
Calculate the lengths of:

(a) A B

(b) E F

Question 4.

Two similar isosceles triangles are shown in the diagram below:



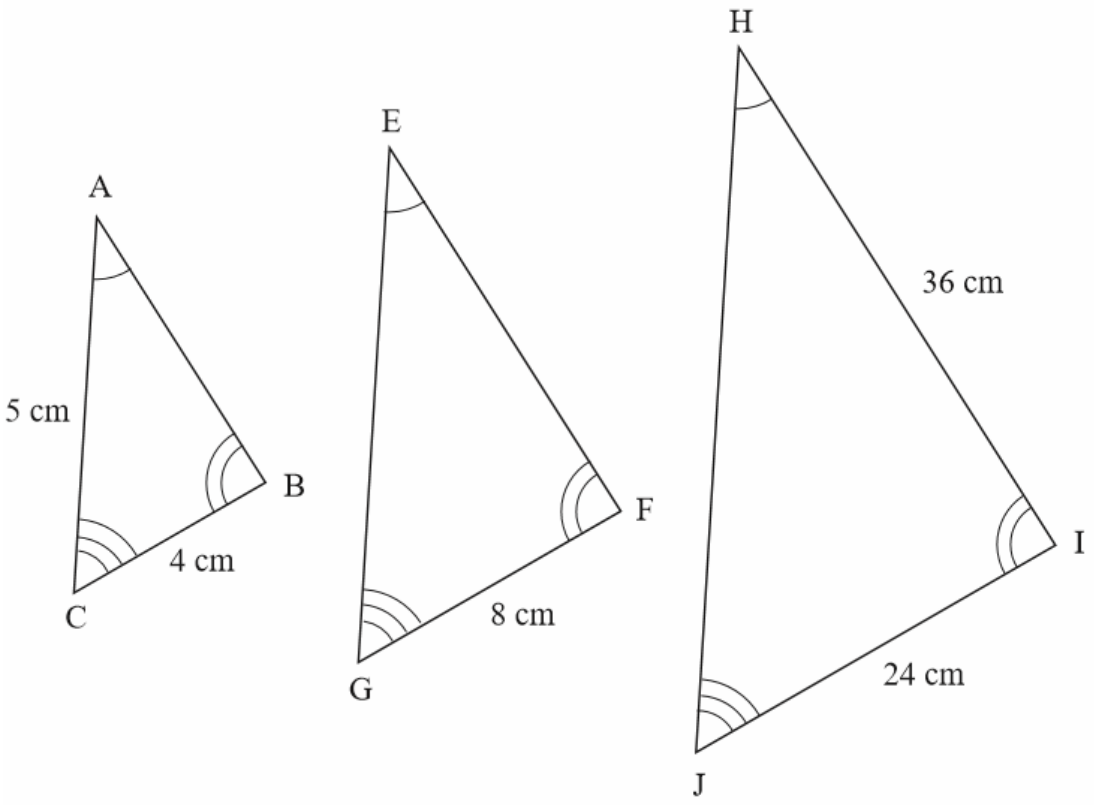
(a) What is the length of D E ?

(b) What is the length of A C ?

(c) Calculate the length of B C.

Question 5.

The following diagram shows three similar triangles:



Calculate the length of:

(a) E G

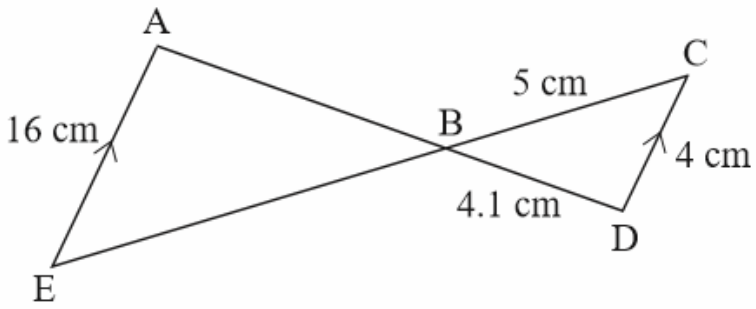
(b) H J

(c) E F

(d) A B

Question 6.

In the diagram below, the lines A E and C D are parallel.



(a) Copy and complete the following statements:

$\angle$ A B E = $\angle$

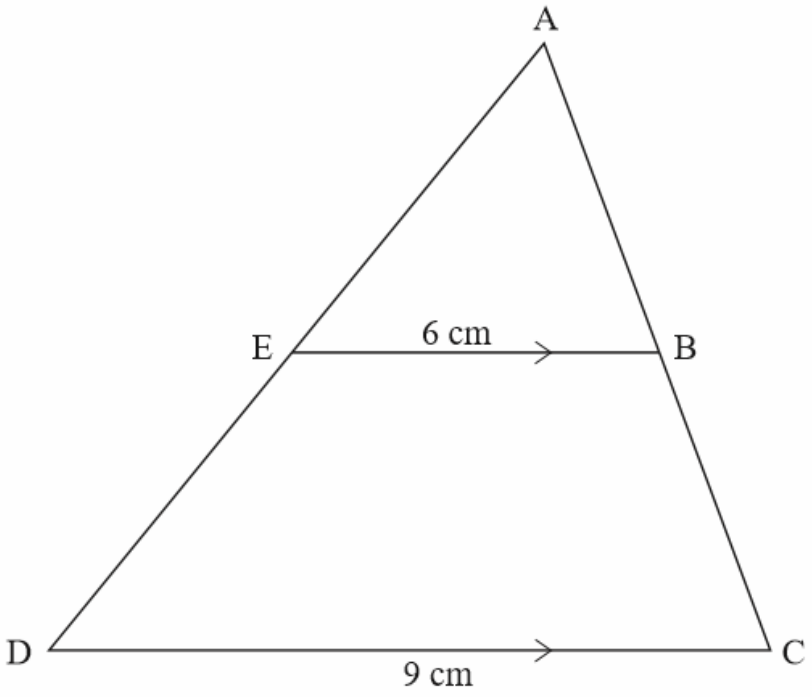
$\angle$ B A E = $\angle$

$\angle$ A E B = $\angle$

(b) Calculate the lengths of A B and B E.

Question 7.

In the diagram shown below the lines B E and C D are parallel.



(a) Explain why the triangles A B E and A C D are similar.

(b) If the length of A B is 4.4 cm, calculate the lengths of A C and B C.

Question 8.

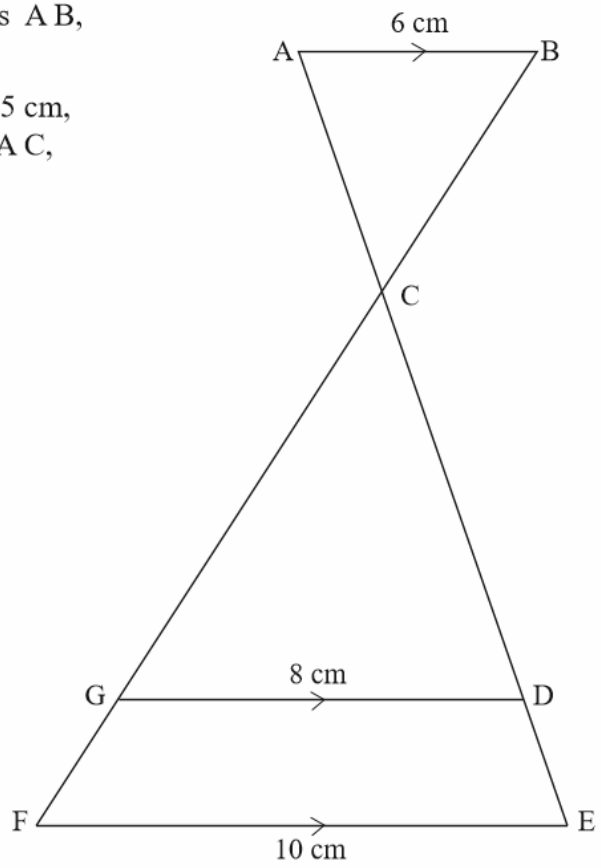
Use the diagram from question 7 above to answer the following question.

If the length of A D is 13.5 cm, determine the lengths of A E and D E.

Question 9.

In the diagram shown, the lines A B, G D and F E are parallel.

If the length of C E is 15 cm, calculate the lengths of A C, C D and D E.



Question 10.

Use the diagram from question 9 above to answer the following question.

If the length of B C is 10.8 cm, calculate the length of F G.

Bonus Question.

A ladder, which has length 6 m, leans against a vertical wall. The angle between the ladder and the horizontal ground is $65°$.

(a) How far is the foot of the ladder from the wall?

(b) What is the height of the top of the ladder above the ground?

In each case, give your answer to the nearest centimetre.

PARCC
Partnership for Assessment of Readiness for College and Careers

High School Mathematics Assessment Reference Sheet

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilograms
1 kilogram = 2.2 pounds
1 ton = 2000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallons
1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d \ \ or \ \ C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$

Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Arithmetic Sequence	$a_n = a_1 + (n-1)d$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Geometric Series	$S_n = \frac{a_1 - a_1 r^n}{1-r}$ where $r \neq 1$
Radians	1 radian $= \frac{180}{\pi}$ degrees
Degrees	1 degree $= \frac{\pi}{180}$ radians

PA00003145

942260 1 2 3 4 5 A B C D E Printed in the USA ISD10957

[PARCC Reference sheet]