a) General 2 2014 O26c

Solve the equation
$$\frac{5x+1}{3}-4=5-7x$$
.

b) General 2 2018 Q28b

Solve the equation
$$\frac{2x}{5} + 1 = \frac{3x+1}{2}$$
, leaving your answer as a fraction.

a) General 2 2014 Q26c

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3

b) General 2 2018 Q28b

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3

a) General 2 2014 O26c

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, leaving your answer as a fraction.

a)
$$x = 1$$

a) General 2 2014 O26c

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3

b) General 2 2018 Q28b

Solve the equation
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action.

a)
$$x = 1$$

b)
$$x = \frac{5}{11}$$

Formulae

Standard

MS-A1 Formulae and Equations updated: 2021-01-21

Learning Outcome

Topic:

Syllabus:

Activities/Tasks:

· review evaluating the subject of a formula, given the value of other

pronumerals in the formula

· Cambridge Ex 3D Q1-27

Formulae

Formulae

Definition 1

A **formula** is an equation which connects two or more variables. The plural of formula is **formulae** or **formulas**.

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A **formula** is an equation which connects two or more variables. The plural of formula is **formulae** or **formulas**.

Generally a formula is written with a single variable, the **subject** on the LHS and the rest on the right.

$$A_{\text{subject}} = \frac{1}{2}ab\cos C$$

If the formula contains two or more variables and we know the value of all but one of them, we can solve an equation to find the remaining variable.

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Step 2: Write down the formula and Substitute the known values into the formula.

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Step 1: State the variables in the formula and the known values.

Step 2: Write down the formula and Substitute the known values into the formula.

Step 3: Solve the one variable equation to find the unknown value.

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height.

Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Example 1 The area of a trapezium is given by $A=\frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm 2 trapezium with parallel lengths of 3 cm and 7 cm.

a = b = a

Calculate the height of a 20 cm
2
 trapezium with parallel lengths of 3 cm and 7 cm.

Solution
$$A = h = h = 0$$

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Solution

 $A = 20 \text{ cm}^2$

h =a =b =

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h = ?a =b =

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| П | | | | |
| | | | | |

Solution
$$A=20~{
m cm}^2$$
 trapezium with parallel lengths of 3 cm and 7 cm. $A=rac{h}{2}(a+b)$

$$h = ?$$

$$a=3\ \mathrm{cm}$$

$$a = 3$$

$$a = 3$$

$$b = 7$$

$$a=3$$
 cm $b=7$ cm

$$b=7\;\mathrm{cm}$$

$$b = 7 \text{ cm}$$

$$\theta = T \text{ CIII}$$

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Solution
$$A=20~\text{cm}^2 \qquad \qquad A=\frac{h}{2}(a+b)$$

$$h=?$$

$$a=3~\text{cm} \qquad \qquad 20=\frac{h}{2}(3+7)$$

 $a=3~\mathrm{cm}$ b=7 cm

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

on
$$A = 20 \text{ cm}^2$$
 $A = \frac{h}{2}(a+b)$ $h = ?$ $a = 3 \text{ cm}$ $20 = \frac{h}{2}(3+7)$ $b = 7 \text{ cm}$ $20 = \frac{h}{2}(10)$

$$a=3$$
 cm

$$a = 3 \text{ cm}$$

 $b = 7 \text{ cm}$

$$p=7$$

$$\frac{n}{2}(3)$$

$$(3+7)$$

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Solution

$$A = 20 \text{ cm}^2$$

$$h=?$$
 $a=3~{
m cm}$

$$a = 3 \text{ cm}$$

 $b = 7 \text{ cm}$

$$20 = \frac{1}{20}$$

$$= \frac{h}{2}(3)$$

$$= \frac{h}{2}(1)$$

20 = 5h

$$A = \frac{h}{2}(a+b)$$
$$20 = \frac{h}{2}(3+7)$$
$$20 = \frac{h}{2}(10)$$

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Solution

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$$a=3 \text{ cm}$$

$$= 3 c$$
 $= 7 c$

$$a = 3 \text{ cm}$$

 $b = 7 \text{ cm}$

$$0 = \frac{h}{2}($$

 $20 \div 5 = 5h \div 5$

$$20 = \frac{h}{2}(10)$$
$$20 = 5h$$

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Solution

$$A = 20 \text{ cm}^2$$

$$h = ?$$

 $a=3~\mathrm{cm}$

$$b=7 \text{ cm}$$

$$A = \frac{h}{2}(a+b)$$
$$20 = \frac{h}{2}(3+7)$$
$$20 = \frac{h}{2}(10)$$

$$=\frac{2}{h}(1)$$

20 = 5h $20 \div 5 = 5h \div 5$ 4 = h

The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height.

Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

Solution

h = ?

 $a=3~\mathrm{cm}$

 $A = 20 \text{ cm}^2$

b=7 cm

 $20 = \frac{h}{2}(3+7)$ $20 = \frac{h}{2}(10)$ 20 = 5h

 $20 \div 5 = 5h \div 5$

4 = hh = 4

 $A = \frac{h}{2}(a+b)$





The area of a trapezium is given by $A = \frac{h}{2}(a+b)$ where a and b are the lengths of the parallel sides and h is the height. Calculate the height of a 20 cm² trapezium with parallel lengths of 3 cm and 7 cm.

$$A=20 \text{ cm}^2$$

 $h=?$
 $a=3 \text{ cm}$

The height of the trapezium is equal to 4 cm.

$$a = 3 \text{ cm}$$

 $b = 7 \text{ cm}$

$$20 = \frac{n}{2}(10)$$
$$20 = 5h$$

 $20 \div 5 = 5h \div 5$ 4 = hh = 4 cm

$$(a+b)$$

$$A = \frac{h}{2}(a+b)$$
$$20 = \frac{h}{2}(3+7)$$

Today's work

• Cambridge Ex 3D Q1-27