

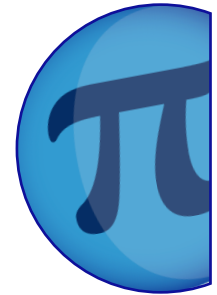


How Algorithms Change the World

NAME:

CLASS:

DATE:



Basic

1) Write down and solve an equation for the following statements:

a) A number is multiplied by 6 then 3 is added; the result is 21.

b) A number is doubled then 32 is subtracted; the result is 50.

2) Solve the following equations:

a) $3x + 2 = 50$

b) $x - 17 = 40$

c) $4x + 5 = 25$

3) If $a = 2$ and $b = 3$, evaluate:

a) ab

b) a^2b

c) $b^2 - a^2$



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Core

1) Solve the following equations for x :

a) $5x + 1 = 21$

b) $4x - 3 = 9$

c) $4x + 10 = 30$

d) $3x - 6 = 12$

e) $2x - 4 = 14$

f) $3x + 9 = 33$

2) Evaluate the following when $a = 3$, $b = 5$ and $c = 7$:

a) ab

b) $a(b + c)$

c) $a(c - b)$

d) $c^2 - b^2$

3) Solve the following equations:

a) $3x + 5 = x + 11$

b) $4x - 3 = 2x + 7$

c) $3x + 2 = 2x + 8$

4) Write down and solve an equation for the following: the perimeter of a rectangle is 42cm; the length is x cm; the width of the rectangle is 3cm shorter than its length. Calculate the length of the rectangle.

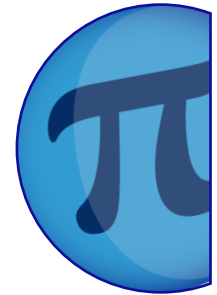


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Advanced

1) Solve the following equations to find x .

a) $4(2x + 5) = 76$

b) $5(3x - 2) = 50$

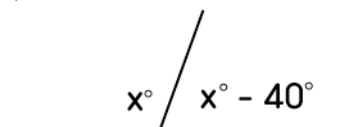
c) $7(2x + 5) = 77$

d) $3x + 2x - 10 = 2x + 11$

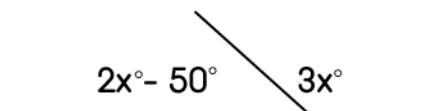
e) $3x + x - 15 = 25 - x$

2) Find x for the following:

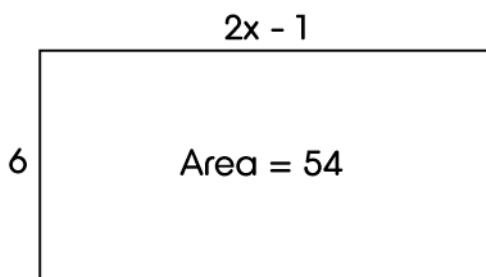
i)



ii)



3) Write down and solve an equation for the following:





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ANSWERS

Basic

1) a) $6x + 3 = 21$; $x = 3$

b) $2x - 32 = 50$; $x = 41$

2) a) $x = 16$

b) $x = 57$

c) $x = 5$

3) a) 6

b) 12

c) 5

Core

1) a) $x = 4$

b) $x = 3$

c) $x = 5$

d) $x = 6$

e) $x = 9$

f) $x = 8$

2) a) 15

b) 36

c) 6

d) 24

3) a) $x = 3$

b) $x = 5$

c) $x = 6$

4) $4x - 6 = 42$; $x = 12\text{cm}$

Advanced

1) a) $x = 7$

b) $x = 4$

c) $x = 3$

d) $x = 7$

e) $x = 8$

2) (i) $x = 110$

(ii) $x = 46$

3) $6(2x - 1) = 54$; $x = 5$