

KS3 Higher Week 9 answers

1/ a, $2x+6y$ b, $4x^2-3x$ c, $4x+4$

2/ a, $x=6$ b, $x=8$ c, $x=8$ d, $x=14$ e, $x=17$

f, $x=5$ g, $a=13$ h, $d=11$ i, $x=7$ j, $m=14$

k, $2x+1=9$
 $2x=8$
 $x=4$ l, $a=7$ m, $x=4$ n, $c=10$ o, $x=7$

p, $x=7$ q, $x=5$ r, $x=12$ s, $a=11$

t, $x=6$ u, $a=-3$ v, $c=-4$ w, $x=-5$ x, $a=-4$ y, $d=-3$

3/ a, $2x+5 = x+9$
 $-x$
 $x+5=9$
 -5
 $x=4$

b, $x=18$

c, $x=5$

d, $x=7$

e, $x=5$

f, $x=4$

g, $x=-2$

h, $x=4$

4/ a, $2x+6=10$
 $2x=4$
 $x=2$

b, $x=8$
 $3x+15=2x+12$
 $x=3$

c, $x=10$

g, $5x-5=3x+21$
 $2x=26$
 $x=13$

d, $a=1$

e, $x=4$

h, $6x-6=9x-18$
 $-12=3x$
 $x=-4$

5/ $n+n = n \times 2$
 $4 \times n = 6n - 2n$

$n \times n = n^2$

$6n \div 2 = n + 3n - n$

$5n + 7n = 6n \times 2$

6/ $2x+1=21$
 $2x=20$
 $x=10$

7/ $2(x-5) = 12$

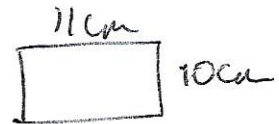
$2x-10 = 12$

$2x = 22$

$x = 11$

8/ Perimeter = $6x = 48\text{cm}$
 $x = 8\text{cm}$

9/ Perimeter = $6x + 12 = 42$
 $6x = 30$
 $x = 5\text{cm}$



Area = $11 \times 10 = 110\text{cm}^2$

10/ $5x+3 = 2x+15$
 $3x+3 = 15$
 $3x = 12$
 $x = 4$

$$11, a) x = \sqrt{4} = 2$$

$$b) x = 5$$

$$c) 2x^2 = 18$$

$$x^2 = 9$$

$$x = 3$$

$$d) x = \sqrt[3]{8}$$

$$x = 2$$

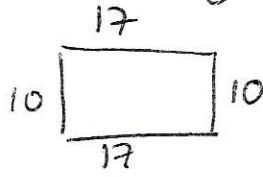
12, Opposite sides are same length

$$3x + 5 = x + 13$$

$$2x + 5 = 13$$

$$2x = 8$$

$$x = 4$$



$$\text{Perimeter} = 54 \text{ cm}$$

$$\text{Area} = 17 \times 10 = 170 \text{ cm}^2$$

$$13, a) x = \frac{4}{5} = 0.8$$

$$b) x = \frac{1}{2} = 0.5$$

$$c) x = \frac{5}{2} = 2\frac{1}{2} = 2.5$$

$$d) x = -\frac{3}{4} = -0.75$$