Changing the Subject of Formula

1) June 2010 V1

11 Make d the subject of the formula $c = \frac{5d + 4w}{2w}$.



2) June 2010 V2

10 Make x the subject of the formula.

$$P = \frac{x+3}{x}$$

Answer x =

[4]

3) June 2010 V3

16 Make *y* the subject of the formula.

$$A = \frac{r(y+2)}{5}$$

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[3]

3

4) November 2010 V1

12 Make x the subject of
$$y = \frac{(x+3)^2}{5}$$
.

$$Answer x = [3]$$

5) November 2010 V2

3 Rearrange the formula J = mv - mu to make m the subject.

$$Answer m = [2]$$

6) November 2010 V3

13
$$a \times 10^7 + b \times 10^6 = c \times 10^6$$

Find c in terms of a and b Give your answer in its simplest form.

Answer $c =$	[2

7) November 2010 V3

16

$$\frac{g}{2} = \sqrt{\frac{h}{i}}$$

Find i in terms of g and h.

Answer
$$i =$$
 [3]

5

8) June 2011 V2

11 Rearrange the formula $c = \frac{4}{a + b}$ to make a the subject.



9) June 2011 V3

2 Make x the subject of the formula. $y = \frac{x}{3} + 5$

$$Answer x = [2]$$



10) November 2011 V1

14

$$T=2\pi\sqrt{\frac{\ell}{g}}$$

(a) Find T when g = 9.8 and $\ell = 2$.

$$Answer(a) T = [2]$$

(b) Make g the subject of the formula.

$$Answer(b) g = [3]$$

11) November 2011 V2

$$w = \frac{1}{\sqrt{LC}}$$

(a) Find w when $L = 8 \times 10^{-3}$ and $C = 2 \times 10^{-9}$. Give your answer in standard form.

$$Answer(a) w =$$
 [3]

(b) Rearrange the formula to make C the subject.

$$Answer(b) C =$$
 [3]

12) November 2011 V3

$$ap = px + c$$

Write p in terms of a, c and x

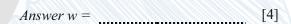


$$Answer p =$$
 [3]

13) June 2012 V1

17 Make *w* the subject of the formula.

$$c = \frac{4 + w}{w + 3}$$



9

14) June 2012 V3

9 Make w the subject of the formula.

$$t = 2 - \frac{3w}{a}$$

Answer
$$w =$$
 [3]

15) November 2012 V1

16 Rearrange the formula $y = \frac{x+2}{x-4}$ to make x the subject.



16) November 2012 V2

$$m = \frac{1}{4} \left[3h^2 + 8ah + 3a^2 \right]$$

Calculate the exact value of m when h = 20 and a = 5.

$$Answer m =$$
 [2]

17) November 2012 V3

16 Make y the subject of the formula.

$$A = \pi x^2 - \pi y^2$$



18) June 2013 V3

20 (a)

$$y = \sqrt{8 + \frac{4}{x}}$$

Find *y* when x = 2.

Give your answer correct to 4 decimal places.



(b) Rearrange $y = \sqrt{8 + \frac{4}{x}}$ to make x the subject.

19) November 2013 V1

10 Make b the subject of the formula.

$$c = \sqrt{a^2 + b^2}$$

 $Answer b = \dots [3]$

20) November 2013 V2

6 Rearrange the formula to make *x* the subject.

$$y = x^2 + 4$$

 $Answer x = \dots [2]$

21) June 2014 V1

7 Make x the subject of the formula.

$$y = (x - 4)^2 + 6$$

 $Answer x = \dots [3]$

22) June 2014 V2

10

$$V = \frac{1}{3}Ah$$

(a) Find V when A = 15 and h = 7.

 $Answer(a) V = \dots [1]$

(b) Make h the subject of the formula.

$$Answer(b) h = \dots [2]$$

23) November 2014 V2

5 Make *r* the subject of this formula.

$$v = \sqrt[3]{p+r}$$

$$Answer r = \dots [2]$$

24) November 2014 V3

8 Make *x* the subject of the formula.

$$y = 2 + \sqrt{x + 8}$$

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$$Answer x = \dots [3]$$

25) November 2015 V1

13 Make x the subject of the formula.

$$y = ax^2 + b$$

 $Answer x = \dots [3]$

26) November 2015 V3

16 Make a the subject of the formula $s = ut + \frac{1}{2}at^2$.

Answer
$$a =$$
 [3]

27) June 2016 V1

$$y = \frac{qx}{p}$$

Write x in terms of p, q and y.

28) June 2016 V2

Make *p* the subject of the formula.

$$rp + 5 = 3p + 8r$$

[3]

29) November 2016 V1

 $18 \quad y = p^2 + qr$

(a) Find y when p = -5, q = 3 and r = -7.

y =.....[2]

(b) Write p in terms of q, r and y.

p =[2]

30) November 2017 V2

25 Factorise completely.

(a)
$$x^2 - x - 132$$

[2]

(b)
$$x^3 - 4x$$

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.....[2]