CHANGING THE SUBJECT – PRACTICE QUESTIONS

1.
Make y the subject of the equation

$$y + z = x$$

$-z$ $-z$

$$y = x - z$$

2.
Make a the subject of the equation

$$a + 3 = b + 10$$

-3 -3

$$a = b + 7$$

3.
Make c the subject of the equation

$$c - d = e + 3d$$

$+d$ $+d$

$$c = e + 4d$$

4.
Make f the subject of the equation

$$f - 10 = g + 4$$

$+10$ $+10$

$$f = g + 14$$

5.
Make h the subject of the equation

$$3h = i + j$$

$\div 3$ $\div 3$

$$h = \frac{i + j}{3}$$

6.
Make k the subject of the equation

$$4k = 3l - m$$

$\div 4$ $\div 4$

$$k = \frac{3l - m}{4}$$

7.
Make n the subject of the equation

$an = p + q$

$\div a$ $\quad$ $\div a$

$n = \frac{p+q}{a}$

8.
Make r the subject of the equation

$br = s - t$

$\div b$ $\quad$ $\div b$

$r = \frac{s-t}{b}$

9.
Make u the subject of the equation

$3u + 1 = t$

-1 $\quad$ -1

$3u = t - 1$

$\div 3$ $\quad$ $\div 3$

$u = \frac{t-1}{3}$

10.
Make w the subject of the equation

$4w - 5 = u$

$+5$ $\quad$ $+5$

$4w = u + 5$

$\div 4$ $\quad$ $\div 4$

$w = \frac{u+5}{4}$

11.
Make y the subject of the equation

$2y + x = w$

$-x$ $\quad$ $-x$

$2y = w - x$

$\div 2$ $\quad$ $\div 2$

$y = \frac{w-x}{2}$

12.
Make a the subject of the equation

$$ba - c = d$$

$+c$ $+c$

$$ba = d + c$$

$\div b$ $\div b$

$$a = \frac{d+c}{b}$$

13.
Make e the subject of the equation

$$ae + b = c$$

$-b$ $-b$

$$ae = c - b$$

$\div a$ $\div a$

$$e = \frac{c-b}{a}$$

14.
Make f the subject of the equation

$$\frac{f}{2} = g$$

$\times 2$ $\times 2$

$$f = 2g$$

15.
Make h the subject of the equation

$$\frac{h}{9} = 2i$$

$\times 9$ $\times 9$

$$h = 18i$$

16.
Make j the subject of the equation

$$\frac{j}{k} = m$$

$\times k$ $\times k$

$$j = km$$

17.
Make n the subject of the equation

$$\frac{n+1}{m} = k$$

$\times m$ $\times m$

$$n+1 = km$$

-1 -1

$$n = km - 1$$

18.
Make p the subject of the equation

$$\frac{p-2}{r} = q$$

$\times r$ $\times r$

$$p-2 = qr$$

$+2$ $+2$

$$p = qr+2$$

19.
Make t the subject of the equation

$$\frac{t+u}{w} = s$$

$\times w$ $\times w$

$$t+u = sw$$

$-u$ $-u$

$$t = sw-u$$

20.
Make y the subject of the equation

$$\frac{y-x}{t} = u$$

$\times t$ $\times t$

$$y-x = ut$$

$+x$ $+x$

$$y = ut+x$$

21.
Make a the subject of the equation

$$a^2 = b$$

$\sqrt{}$ $\sqrt{}$

$$a = \sqrt{b}$$

22.
Make c the subject of the equation

$$c^2 = d$$

$\sqrt{}$ $\sqrt{}$

$$c = \sqrt{d}$$

23.
Make e the subject of the equation

$$e^2 + 10 = f$$

-10 -10

$$e^2 = f - 10$$

$\surd$ $\surd$

$$e = \sqrt{f - 10}$$

24.
Make g the subject of the equation

$$g^2 - 5 = h + 1$$

$+5$ $+5$

$$g^2 = h + 6$$

$\surd$ $\surd$

$$g = \sqrt{h + 6}$$

25.
Make j the subject of the equation

$$4j^2 = i$$

$\div 4$ $\div 4$

$$j^2 = \frac{i}{4}$$

$\surd$ $\surd$

$$j = \sqrt{\frac{i}{4}}$$

26.
Make k the subject of the equation

$$mk^2 = n$$

$\div m$ $\div m$

$$k^2 = \frac{n}{m}$$

$\surd$ $\surd$

$$k = \sqrt{\frac{n}{m}}$$

27.
Make p the subject of the equation

$$\frac{p^2}{5} = 2q$$

$\times 5$ $\times 5$

$$p^2 = 10q$$

$\surd$ $\surd$

$$p = \sqrt{10q}$$

28.
Make t the subject of the equation

$$\sqrt{t} = r$$

square square

$$t = r^2$$

29.
Make u the subject of the equation

$$\sqrt{u+1} = t$$

square square

$$u+1 = t^2$$

-1 -1

$$u = t^2 - 1$$

30.
Make w the subject of the equation

$$\sqrt{w-10} = t$$

square square

$$w-10 = t^2$$

$+10$ $+10$

$$w = t^2 + 10$$

31.
Make y the subject of the equation

$$\sqrt{y} + x = 1$$

$-x$ $-x$

$$\sqrt{y} = 1 - x$$

square square

$$y = (1-x)^2$$

32.
Make a the subject of the equation

$$2(a+3) = 10b$$

$$2a + 6 = 10b$$

-6 -6

$$2a = 10b - 6$$

$\div 2$ $\div 2$

$$a = 5b - 3$$

33.
Make c the subject of the equation

$$3(c+2) = 18d$$

$$3c + 6 = 18d$$

-6 -6

$$3c = 18d - 6$$

$\div 3$ $\div 3$

$$c = 6d - 2$$

34.
Make e the subject of the equation

$$6e + d = 2e + f$$

$-2e$ $-2e$

$4e + d = f$

$-d$ $-d$

$4e = f - d$

$\div 4$ $\div 4$

$$e = \frac{f - d}{4}$$

35.
Make g the subject of the equation

$$9g - h = j + 4g$$

$-4g$ $-4g$

$5g - h = j$

$+h$ $+h$

$5g = j + h$

$\div 5$ $\div 5$

$$g = \frac{j + h}{5}$$

36.
Make j the subject of the equation

$$3j - 2k = 5k - 7j$$

$+7j$ $+7j$

$10j - 2k = 5k$

$+2k$ $+2k$

$10j = 7k$

$\div 10$ $\div 10$

$$j = \frac{7k}{10}$$

37.
Make m the subject of the equation

$$pm + q = n$$

$-q$ $-q$

$pm = n - q$

$\div p$ $\div p$

$$m = \frac{n - q}{p}$$

38.
Make t the subject of the equation

$$t^3 = u + v$$

$\sqrt[3]{\ }$ $\sqrt[3]{\ }$

$$t = \sqrt[3]{u + v}$$

39.
Make y the subject of the equation

$$\frac{y + 10}{x} = 2$$

$\times x$ $\times x$

$y + 10 = 2x$

-10 -10

$y = 2x - 10$

40.
Make a the subject of the equation

$$\frac{4a+3}{5}=b$$

$\times 5$ $\quad 4a+3=5b \quad$ $\times 5$

-3 $\quad 4a=5b-3 \quad$ -3

$\div 4$ $\quad a=\frac{5b-3}{4} \quad$ $\div 4$

41.
Make c the subject of the equation

$$\sqrt{\frac{c+1}{10}}=d$$

square $\quad \frac{c+1}{10}=d^2 \quad$ square

$\times 10$ $\quad c+1=10d^2 \quad$ $\times 10$

-1 $\quad c=10d^2-1 \quad$ -1

42.
Make e the subject of the equation

$$\frac{e^2+f}{3}=g$$

$\times 3$ $\quad e^2+f=3g \quad$ $\times 3$

$-f$ $\quad e^2=3g-f \quad$ $-f$

$\sqrt{}$ $\quad e=\sqrt{3g-f} \quad$ $\sqrt{}$

43.
Make h the subject of the equation

$$\frac{4h-9}{7}=2k$$

$\times 7$ $\quad 4h-9=14k \quad$ $\times 7$

$+9$ $\quad 4h=14k+9 \quad$ $+9$

$\div 4$ $\quad h=\frac{14k+9}{4} \quad$ $\div 4$

44.
Make k the subject of the equation

$$7(k-4)=5(k+j)$$

$7k-28=5k+5j$

$-5k$ $\quad 2k-28=5j \quad$ $-5k$

$+28$ $\quad 2k=5j+28 \quad$ $+28$

$\div 2$ $\quad k=\frac{5j+28}{2} \quad$ $\div 2$