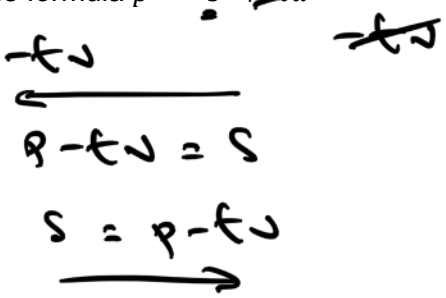
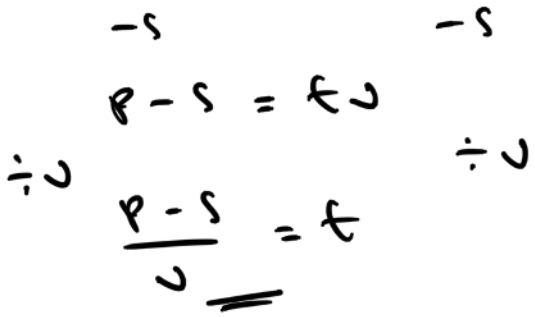
Quick Test - Rearranging formulae

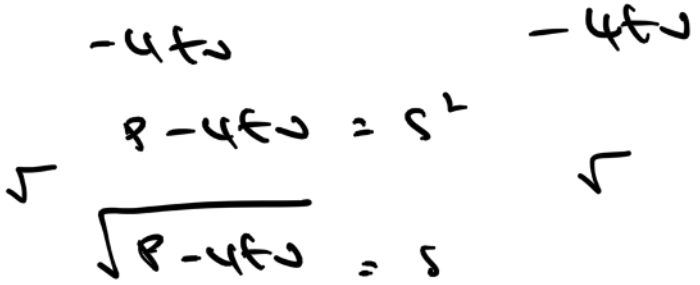
1. Make s the subject of the formula $p = s + tu$ (1 mark)



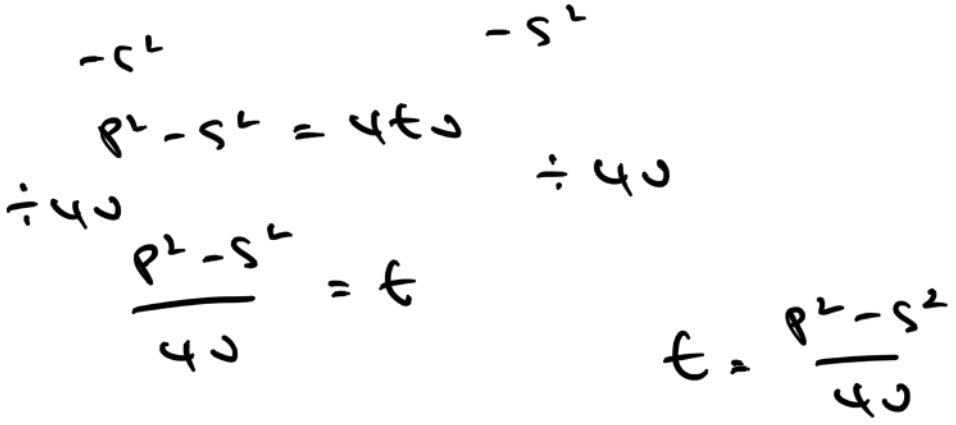
2. Make t the subject of the formula $p = s + tu$ (1 mark)



3. Make s the subject of the formula $p = s^2 + 4tu$ (2 marks)



4. Make t the subject of the formula $p^2 = s^2 + 4tu$ (2 marks)



Quick Test - Rearranging formulae

5. Make t the subject of the formula $v = \frac{1}{6}t + 6w$ (2 marks)

$-6w \quad -6w$

$v - 6w = \frac{1}{6}t$

$\times 6 \quad +6$

$6(v - 6w) = t$

6. Make w the subject of the formula $v = 0.2t + 5w^2$ (2 marks)

$-0.2t \quad -0.2t$

$v - 0.2t = 5w^2$

$\div 5 \quad \div 5$

$\sqrt{\frac{v - 0.2t}{5}} = w$

7. Make a the subject of the formula $P = \pi r + 2r + 2a$ (2 marks)

$-\pi r \quad -\pi r$

$P - \pi r = 2r + 2a$

$-2r \quad -2r$

$\frac{P - \pi r - 2r}{2} = a$

8. Make a the subject of the formula $3a + b = x(a + c)$ (3 marks)

$3a + b = ax + cx$

$-ax \quad -ax$

$3a - ax + b = cx$

$-b \quad -b$

$3a - ax = cx - b$

$a(3 - x) = cx - b$

$\Rightarrow a = \frac{cx - b}{3 - x}$

Quick Test - Rearranging formulae

9. Make b the subject of the formula $b(3 + d) = x(b + c)$ (2 marks)

$3b + bd = xb + xc$

$3b + bd - xb = xc$

$b(3 + d - x) = xc$

$b = \frac{xc}{3 + d - x}$

10. Make c the subject of the formula $b(3 + cd) = x(b + c)$ (3 marks)

$3b + bcd = bx + cx$

$bcd - cx = bx - 3b$

$c(bd - x) = bx - 3b$

$c = \frac{bx - 3b}{bd - x}$

11. Make y the subject of the formula $3(y + 2) = a(5 - 2y)$ (3 marks)

$3y + 6 = 5a - 2ay$

$3y + 2ay = 5a - 6$

$y(3 + 2a) = 5a - 6$

$y = \frac{5a - 6}{3 + 2a}$

12. Make p the subject of the formula $x = \frac{p + 5}{p + 6}$ (3 marks)

$x(p + 6) = 1(p + 5)$

$xp + 6x = p + 5$

$xp - p = 5 - 6x$

$p(x - 1) = 5 - 6x$

$p = \frac{5 - 6x}{x - 1}$

Quick Test - Rearranging formulae

13. Make p the subject of the formula $\frac{x}{1} = \frac{p+5}{p-t}$ (3 marks)

$x(p-t) = p+5$

$px - xt = p+5$

$px - p = 5+xt$

$p(x-1) = 5+xt$

$p = \frac{5+xt}{x-1}$

14. Make x the subject of the formula $\frac{a}{c} = \frac{5x}{x+6}$ (3 marks)

$a(x+6) = c(5x)$

$ax + 6a = 5cx$

$ax - 5cx = -6a$

$x(a-5c) = -6a$

$x = \frac{-6a}{a-5c}$

$6a = 5cx - ax$

$6a = x(5c-a)$

$\frac{6a}{5c-a} = x$

15. Make y the subject of the formula $\frac{a}{2c} = \frac{5y}{y+6}$ (3 marks)

$a(y+6) = 2c(5y)$

$ay + 6a = 10cy$

$6a = 10cy - ay$

$6a = y(10c-a)$

$\frac{6a}{10c-a} = y$

16. Make z the subject of the formula $\frac{a}{c} = \frac{4+5yz}{3y-3}$ (3 marks)

$a(3y-3) = c(4+5yz)$

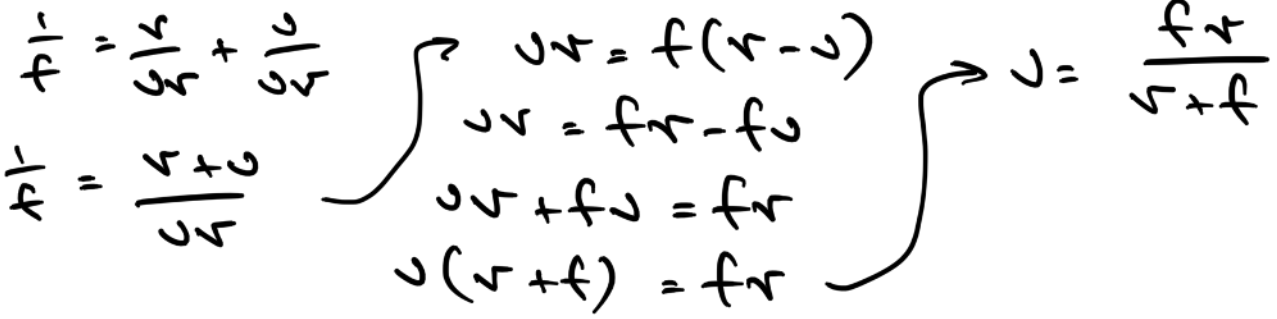
$3ay - 3a = 4c + 5cyz$

$3ay - 3a - 4c = 5cyz$

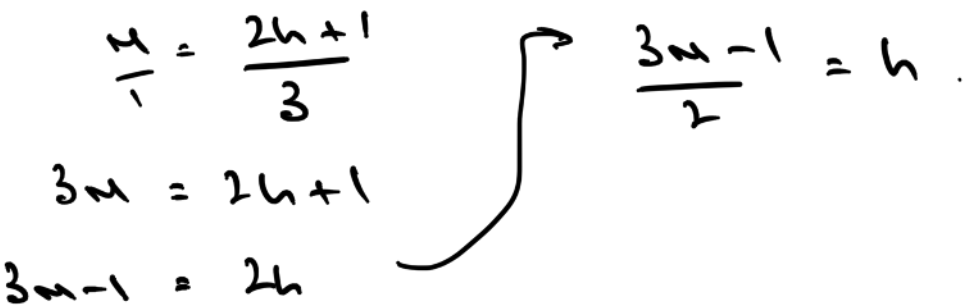
$\frac{3ay - 3a - 4c}{5cy} = z$

Quick Test - Rearranging formulae

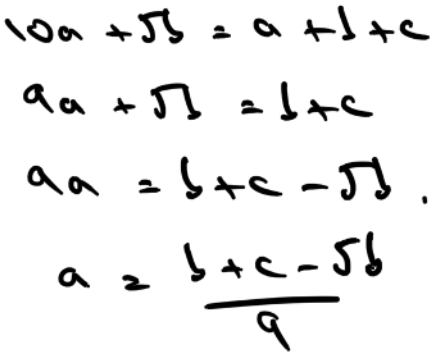
17. Make u the subject of the formula $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$ (3 marks)



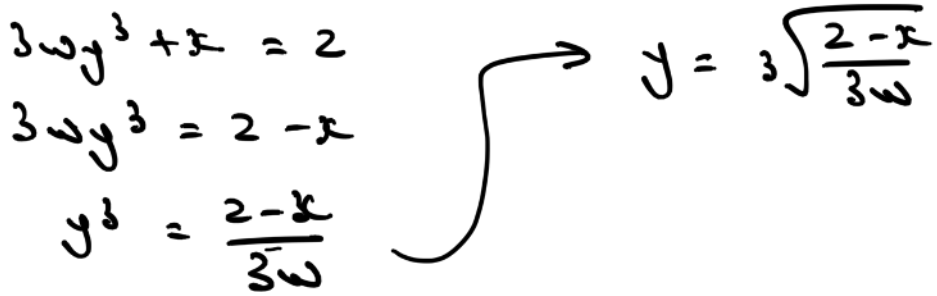
18. Make h the subject of the formula $m = \sqrt{\frac{2h+1}{3}}$ (3 marks)



19. Express a in terms of b and c. $5(2a + b) = a + b + c$ (3 marks)



20. Make y the subject of the formula $x = z - 3wy^3$ (3 marks)



Total /50 marks