Chapter Problems

Directions: solve the following equations/expressions for the variable indicated. Show all work!

Solving for a variable $s = \frac{d}{t}$

Class Work

1. $s = \frac{d}{t}$ for d

2. $s = \frac{d}{t}$ for t

3. $V = \frac{I}{R}$ for V

4. $V = \frac{I}{R}$ for R

5. $E = hf$ for h

6. $E = \frac{hc}{\lambda}$ for λ

Homework

7. $d = st$ for s

8. $M = \frac{g}{L}$ for g

9. $M = \frac{g}{L}$ for L

10. $E = \frac{hc}{\lambda}$ for h

11. $E = \frac{hc}{\lambda}$ for c

12. $5\text{g/mL}) = \frac{(m)}{20\text{mL}}$ for m

Solving for a variable $v = v_0 + at$
Class Work

13. $v = v_0 + at$ for a

14. $v = v_0 + at$ for v_0

15. $v = v_0 + at$ for t

16. $y = mx + b$ for b

17. $y = mx + b$ for x

18. $y = mx + b$ for m

19. $a = \frac{v - v_0}{t}$ for t

20. $m = \frac{y - b}{x}$ for b

Homework

21. $hf = E + W_0$ for f

22. $hf = E + W_0$ for W_0

23. $hf = E + W_0$ for E

24. $a = \frac{v - v_0}{t}$ for v

25. $m = \frac{y - b}{x}$ for x

Answers

1) $d = st$
2) $t = \frac{d}{s}$
3) $V = \frac{I}{R}$
4) $R = \frac{I}{V}$
5) $h = \frac{E}{f}$
6) $\lambda = \frac{hc}{E}$
7) $s = \frac{d}{t}$
8) $g = ML$
9) $L = \frac{g}{M}$
10) $h = \frac{E\lambda}{c}$
11) $c = \frac{E\,\lambda}{h}$
12) $m = 100g$
13) $a = \frac{v - v_0}{t}$
14) $v_0 = v - at$
15) $t = \frac{v - v_0}{a}$
16) $b = y - mx$
17) $x = \frac{y - b}{m}$
18) $m = \frac{y - b}{x}$
19) $t = \frac{v - v_0}{a}$
20) $b = y - mx$
21) $f = \frac{E + W_0}{h}$
22) $W_0 = hf - E$
23) $E = hf - W_0$
24) $v = v_0 + at$
25) $x = \frac{y - b}{m}$

26) $d = st$

27) $t = \frac{d}{s}$

28) $V = \frac{I}{R}$

29) $R = \frac{I}{V}$

30) $h = \frac{E}{f}$

31) $\lambda = \frac{hc}{E}$

32) $s = \frac{d}{t}$

33) $g = ML$

34) $L = \frac{g}{M}$

35) $h = \frac{E\lambda}{c}$

36) $c = \frac{E\,\lambda}{h}$

37) $m = 100g$

38) $a = \frac{v - v_0}{t}$

39) $v_0 = v - at$

40) $t = \frac{v - v_0}{a}$

41) $b = y - mx$

42) $x = \frac{y - b}{m}$

43) $m = \frac{y - b}{x}$

44) $t = \frac{v - v_0}{a}$

45) $b = y - mx$

46) $f = \frac{E + W_0}{h}$

47) $W_0 = hf - E$

48) $E = hf - W_0$

49) $v = v_0 + at$

50) $x = \frac{y - b}{m}$

