Tutorial Sheet – lesson (6)

Qu ① Calculate:

(a) $\frac{1}{3.4} + 5.6 =$

(b) $\frac{\sqrt{7.36 \times 10^4}}{6 + 2.5} =$

(c) $(0.321)^5 =$

(d) $(2.63 \times 10^3)^4 =$

(e) $\sqrt{\frac{92.4}{21.3}} =$

(f) $\left(\frac{2.4 \times 10^6}{3.8 \times 10^{-3}}\right)^2 =$

(g) $\frac{\sqrt{1.82}}{2.41 \times 9.8} =$

(h) $3.4^{\frac{1}{3}} =$

(i) $\frac{1}{4.6} + \frac{1}{3.14} =$

(j) $2.31 \times \pi \times \sqrt[4]{4.08} =$

(k) $3 \times 10^{-2} + 4.3 \times 10^{-1} =$

(l) $\frac{3.41 - 2.83}{8.3 \times 2.1} =$

Qu ② Substitution:

(a) Find $D = \sqrt{b^2 - 4ac}$ if $a = 3 \quad b = 11 \quad c = -2$

(b) Find $A = \pi\left(\frac{D^2}{4} - \frac{d^2}{4}\right)$ if $D = 9 \times 10^{-2} \quad d = 4.16 \times 10^{-2}$

(c) Find $C = \pi \times \sqrt{\frac{D^2 + d^2}{2}}$ if $D = 12.5 \quad d = 6.25$

ANSWERS:

Qu ①: (a) 12.64 (b) 5×10^{-3} (c) 31

Qu ②: (a) 5.89 (b) 31.9 (c) 3.41×10^{-3} (d) 4.78×10^{13} (e) 2.08 (f) 3.99×10^{17}

(g) 5.71×10^{-2} (h) 1.56 (i) 0.536 (j) 10.3 (k) 0.46 (l) 0.0333

CALCULATOR EX'S

Use a calculator to evaluate, correct to two decimal places in standard form:

1. $\dfrac{586}{0.472 \times 0.0683}$
2. $\dfrac{3.45 \times 10^{-2} \times 1.34}{8.73 \times 10^{2} \times 7.69 \times 10^{2}}$
3. $6.71 - 3.84 \times 5.62$
4. $\dfrac{0.002\,83}{0.431 + 2.34 \times 0.754}$
5. $\dfrac{1.32 \times 8.42 \times 10^{-5}}{0.683 - 3.47}$
6. $(42.8 \div 16.9) + (1.73 \times 4.07)$
7. $\dfrac{1}{0.468 + 0.933}$
8. $\dfrac{0.608 \times 0.867}{\sqrt{0.0873 \times 0.681}}$
9. $\dfrac{0.681 \times 1.08}{62.8 + \sqrt{834}}$
10. $\dfrac{41.8 \times 3.41 \times \sqrt{86.4}}{\sqrt{2.35 \times 4.41 + 5.63}}$
11. $\sqrt{69.3 + (4.87)^2}$
12. $2.83 + \sqrt{8.96} - \frac{1}{0.426}$
13. $\dfrac{8.93 \times 10^{2}}{1.32 \times 10^{-2} \times 4.21 \times 10^{-3}}$
14. $0.0683 \div \frac{97\,400}{0.0481}$
15. $0.0684 \times (9.86 - 7.97)$
16. $\dfrac{8.67 \times 10^{-7}}{223 + 10.7 \times 3.86}$
17. $\dfrac{0.0634 + 0.862}{0.123 - 0.186}$
18. $\dfrac{17.7}{3.41 \times (8.62 - 6.88)}$
19. $438 \times \sqrt{9640}$
20. $\dfrac{8.36 - 6.89}{\sqrt{5.34 \times 1.32}}$
21. $\dfrac{6.14 \times \sqrt{9.76}}{80.4 - \sqrt{6.85}}$
22. $\dfrac{\sqrt{81.9 - 6.08}}{\sqrt{4.38} - \sqrt{3.41}}$
23. $(8.93 \times 10^{7})^2 \times 1.68$
24. $\dfrac{(89.3)^2 \times \sqrt{683}}{5.86 \times 4.13 \times 3.89}$
25. $\dfrac{89.3 \times 426}{0.073 \times 0.006\,14}$
26. $0.006\,83 + 4.6 \times 0.125$
27. $\dfrac{3.42 \times 10^{13}}{0.632 + 0.0873}$
28. $\dfrac{2.06 \times 10^{-4}}{85.6 - 3.89 \times 2.43}$
29. $\frac{11}{13} - \frac{13}{17}$
30. $8.34 - \frac{1}{0.0836}$
31. $\sqrt{6.03} - \sqrt{3.19}$
32. $\dfrac{0.691 + 0.483}{\sqrt{0.0681 - 0.0493}}$

ANSWERS

1. 1.82×10^{4} 2. 6.89×10^{-8} 3. -1.49×10 4. 1.29×10^{-3} 5. -3.99×10^{-5} 6. 9.57
7. 7.14×10^{-1} 8. 2.16 9. 8.02 $\times 10^{-3}$ 10. 3.31×10^{2} 11. 9.64 12. 3.48 13. 1.61×10^{7}
14. 3.37×10^{-8} 15. 1.29×10^{-1} 16. 3.28×10^{-9} 17. -1.47×10 18. 2.98
19. 4.30×10^{4} 20. 5.54×10^{-1} 21. 2.47×10^{-1} 22. 9.06×10 23. 1.34×10^{16}
24. 2.21×10^{3} 25. 8.49×10^{7} 26. 5.82×10^{-1} 27. 4.75×10^{13} 28. 2.71 $\times 10^{-6}$
29. 8.14×10^{-2} 30. -3.62 31. 6.70×10^{-1} 32. 8.56 33. 9.27×10^{6} 34. 7.61×10
35. 3.51×10^{-5} 36. 2.57×10^{-1}