PURE MATHS PAPER 1_1 Result

① $\frac{1}{2}$, $\frac{3}{4}$ etc

② $\frac{3}{2}$, $\frac{7}{4}$ etc

③ $2\frac{1}{2}$, $8\frac{1}{3}$ etc.

---

② $T.C = C.P + VAT$

$40 = C.P + \frac{10}{100} CP.$

$40 = C.P + 0.1CP = 1.1CP$

$C.P = \frac{40}{1.1} = 36.36$

$\Rightarrow VAT = 40 - 36.36 = £3.64$

---

③ $4 \times 8 - 2$

$32 - 2 = 30$

---

④ $\frac{3}{7+\sqrt{2}} \left(\frac{7-\sqrt{2}}{7-\sqrt{2}}\right)$

$= \frac{3(7-\sqrt{2})}{49-2} = \frac{21-3\sqrt{2}}{47}$

---

⑤ $\frac{4P^3}{a^2}$

---

⑥ $2x^2 - 6x + 7x - 21$

$2x^2 + x - 21$

---

⑦ $1(a)^3(2b)^0 + 3a^2(2b) + 3a(2b)^2 + 1(a)^0(2b)^3$

$a^3 + 6a^2b + 12ab^2 + 8b^3$

(8) $y(2x-5) = x+3$

$2yx - 5y = x + 3$

$2yx - x = 3 + 5y$

$x(2y-1) = 3 + 5y$

$x = \frac{3+5y}{2y-1}$

---

(9) $x + 4y = 10$

$-\ x - 3y = 4$

$7y = 6$

$y = \frac{6}{7}$

$\Rightarrow x + 4\left(\frac{6}{7}\right) = 10$

$x = 10 - \frac{24}{7} = 6.85$

See answer at the End.

---

(10) $17^2 = q^2 + 15^2$

$q^2 = 17^2 - 15^2$

$q = \sqrt{17^2 - 15^2} = 8$

---

(11) ~~1.09 — 3 s.f~~

~~1.095 — 3 d.p.~~

1.1 — 2 s.f

1.09 — 2 d.p

---

(12) $360^\circ \equiv 2\pi$ rad

$62 \equiv x$ rad

$x = \frac{2\pi(62)}{360} = 1.08$ rad

(12) $360 = 2\pi$ rad

$x = 1.9$ rad

$$x = \frac{360 \times 1.9}{2\pi} = 108.8^\circ$$

---

(13) $\theta = \sin^{-1}(0.6586)$

$\theta = 41.2$

$\theta_1 = 180 + 41.2 = 221.2^\circ$

$\theta_2 = 360 - 41.2 = 318.8$

---

(14) $a^2 = 10^2 + 5^2 - 2(10)(5)\cos 120$

$= 125 + 50 = 175$

$a = 13.23$.

9

$$\begin{array}{r} x + 4y = 10 \\ -\ x - 3y = 4 \\ \hline 7y = 6 \end{array}$$

$y = 6/7$

$\Rightarrow \quad x + 4(6/7) = 10$

$x = 10 - 6/7 = 9.85$