

NS Maths Homework

① a) $x^2 + 9x + 14$

b) $y^2 - 4y - 21$

c) $h^2 - 9h + 20$

d) $6c^2 - 21c + 16c - 56$

$= 6c^2 - 5c - 56$

e) $5d - 10d^2 + 4 - 8d$

f) $9a^2 + 21a + 21a + 49$

$= -10d^2 - 3d + 4$

$= 9a^2 + 42a + 49$

g) $16p^2 - 36p - 36p + 81$

$= 16p^2 - 72p + 81$

h) $64h^2 - 56h - 56h + 49 + 4 - 10h - 10h + 25h^2$

$= 89h^2 - 112h - 20h + 53$

$= 89h^2 - 132h + 53$

②

$V = \frac{1}{3}Ah$

Area = $\frac{1}{2} \times b \times h$

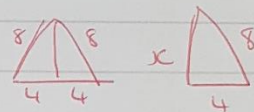
$= \frac{1}{3} \times 16\sqrt{3} \times 12$

$= \frac{1}{2} \times 8 \times 4\sqrt{3}$

$= 64\sqrt{3}$

$= 16\sqrt{3}$

$= 110.85 \text{ cm}^3$ (2d.p.)



$x^2 = 8^2 - 4^2$

$x = 4\sqrt{3}$

③

a) $3x(3-2y)$

b) $3pq(5p-q)$

c) $(4a+3)(4a-5)$

d) $(a+2b)(a-2b)$

e) $(d^2+5)(d^2-5)$

f) $(w+9)(w+2)$

g) $(m-4)(m-4) = (m-4)^2$

h) $(7d-1)(d-1)$

④

a) gradient = $\frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - (-2)}{5 - 3} = \frac{9}{2}$

b) grad = $\frac{-5 - (-1)}{12 - (-4)} = \frac{-4}{16} = -\frac{1}{4}$

⑦

a) $(x+3)^2 + 2$

b) $(c-4)^2 - 21$

c) $(y+2)^2 - 14$