

NS Homework

a) gradient = 3

point = (0, 6)

d) $gr = \frac{1}{2}$
(0, -7/4)

b) $gr = -2$
(0, 5)

e) $gr = 1$
(0, -4)

c) $gr = -3$
(0, 4)

② a) $y = mx + c$
 $9 = 5(0) + c$
 $9 = 0 + c$
 $c = 9$
 $y = 5x + 9$

b) $7 = -8(0) + c$
 $c = 7$
 $y = -8x + 7$

c) $-4 = \frac{1}{2}(0) + c$
 $c = -4$
 $y = \frac{1}{2}x - 4$

d) $6 = 2(1) + c$
 $c = 4$
 $y = 2x + 4$

e) $2 = -4(5) + c$
 $22 = c$
 $y = -4x + 22$

③ $6x^2 - 15x + 8x - 20$
 $= 6x^2 - 7x - 20$

④ $2x(x - 5)$

⑤ $2.998 \times 10^8 \times 60 \times 60 \times 24 \times 365$
 $= 9.45 \times 10^{15}$ (3 s.f)

⑥ $\sqrt{3}(2\sqrt{3} + \sqrt{6})$
 $= 2\sqrt{9} + \sqrt{18}$
 $= 6 + 3\sqrt{2}$

b) $\frac{\sqrt{5}}{\sqrt{40}} \times \frac{\sqrt{40}}{\sqrt{40}}$
 $= \frac{\sqrt{200}}{40}$
 $= \frac{10\sqrt{2}}{40}$
 $= \frac{\sqrt{2}}{4}$

c) $32^{1/2} + 2^0$
 $= 2^5 + 1$

$$\textcircled{7} \quad \frac{2}{x^2} - \frac{1}{3x} = \frac{36}{3x^2} - \frac{x}{3x^2} = \frac{6-x}{3x^2}$$

$$\textcircled{8} \quad \text{Area} = \frac{70}{360} \times \pi \times 18.4^2 \\ = 206.8 \text{ cm}^2$$