

10. p. 17 # 10, 12, 14, 19, 20

$$t_1 = 5y \quad t_n = t_1 + (n-1)d$$

$$d = -3y \quad t_n = 5y + (n-1)(-3y)$$

$$t_n = 5y - 3yn + 3y$$

$$t_n = 8y - 3yn$$

so  $t_{15} = 8y - 3y(15)$

$$t_{15} = 8y - 45y$$

$$t_{15} = -37y$$

12.  $t_1 = x, t_2 = y, t_3 = z$

$$y - x = d \quad \text{and} \quad z - y = d \quad \text{so} \quad y - x = z - y$$

$$2y - x = z$$

14. 132 players  
start 8:00am  
8 min. apart

a) 8:00, 8:08, 8:16, 8:24

b)  $\frac{60}{8} = 7.5 = 7$  round (can't have half a tee time)

7 + start time = 8 tee times

8 x 4 people per start = 32 people

c)  $t_n = 8:00 + (n-1)0.08$

d)  $\frac{132}{4} = 33$  groups

1 at the start  
 $32 \times 8 = 256$  min

$\frac{256 \text{ min}}{60 \text{ min/hr}} = 4 \text{ hr. } 16 \text{ min}$

$8:00 + 4:16 = 12:16$  just afternoon

e) weather, the experience of golfers

D.17 cont.

19. 14.7 psi / 30ft of descent

a) 14.7, 29.4, 44.1, 58.8

$$t_n = 14.7 + (n-1)(14.7)$$

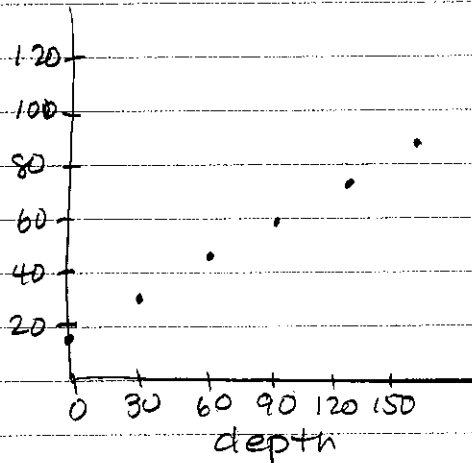
$$t_n = 14.7 + 14.7n - 14.7$$

$$t_n = 14.7n$$

b)  $t_{1000} = 14.7(1000)$   
 $t_{1000} = 14700$  psi

$t_{2000} = 14.7(2000)$   
 $t_{2000} = 29400$  psi

c) Since this is not a graphing section I will sketch not draw a graph!

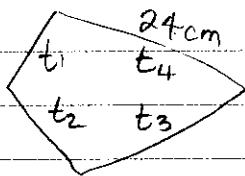


d) y-intercept = 14.7 psi  
 (sea level)

e) slope = 14.7 (common difference)

f) The y-intercept is the first term and the slope is the common difference.

20.



$$\frac{t_1 + t_1 + d}{t_1} \cdot \frac{t_1 + d}{t_2} \cdot \frac{t_1 + 2d}{t_3} \cdot \frac{t_1 + 3d}{t_4}$$

perimeter is 60cm so that is the sum of the 4 terms

$$t_1 + t_1 + d + t_1 + 2d + t_1 + 3d = 60 \quad \text{and} \quad t_1 + 3d = 24$$

$$\frac{4t_1}{2} + \frac{6d}{2} = \frac{60}{2}$$

$$2t_1 + 3d = 30$$

$$t_1 + 3d = 24$$

$$\begin{array}{r} 2t_1 + 3d = 30 \\ -t_1 \quad \quad = -6 \\ \hline t_1 = 6 \end{array}$$

$$6 + 3d = 24$$

$$3d = 18$$

$$d = 6$$

$$\leftarrow t_1 = 6$$

6, 12, 18