Practice Assessment Geometry + Measure
Nat 5

1. $T = \frac{D}{S}$

$= \frac{5246}{920}$

$= 5.70$ hrs

= 5 hrs and 0.7×60 mins
= 5 hrs and 42 mins
+ stop over (2 hrs + 45 mins)

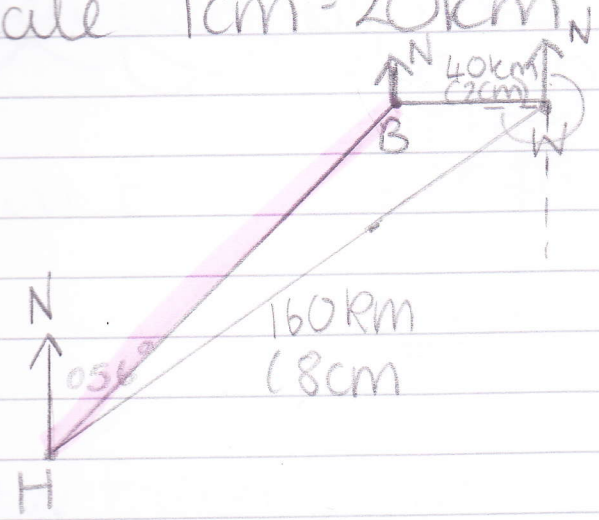
= 8 hrs and 27 mins

(b) 21:53 our time (-5 hours to get to their time)
⇒ 16:53

(c) No as this will be 0500 in New York

(d) Phone her at 2100 NY time which will be 1600 for far time. (Any time which is out with teaching hours + not into sleep time.

2. Scale 1cm = 20km



) 6.7cm = 6.7 × 20
= 134km back to base

) 20% of 70 = 14km/hr

max speed ⇒ 70 + 14 = 84km/hr
min speed ⇒ 70 - 14 = 56km/hr

Whole Journey ⇒ 160 + 40 + 134
= 334km

x Time = $\frac{334}{84}$
= 3.98
= 3hrs + 0.98 × 60mins
= 3hrs + 59 mins

un time = $\frac{334}{56}$
= 5.96

3. $V = \frac{4}{3}\pi \times (0.5)^3$

$= \frac{4}{3} \times 0.3926$

$\doteq$

$= 0.52\ cm^3$ $\quad 1cm^3 = 1mL$

$= 0.52\ mL$ to 2dp

(b) $2000mL \doteq 0.52$

$\Rightarrow 3846.15$

$\Rightarrow$ 3846 pills

(c) $V_{cylinder} \Rightarrow 0.52mL$ $\quad d = 1.4$, $r = 0.7$

$\pi r^2 \times h = 0.52$

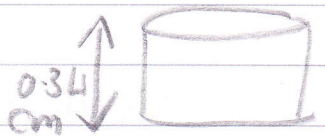
$\pi \times (0.7^2) \times h = 0.52$

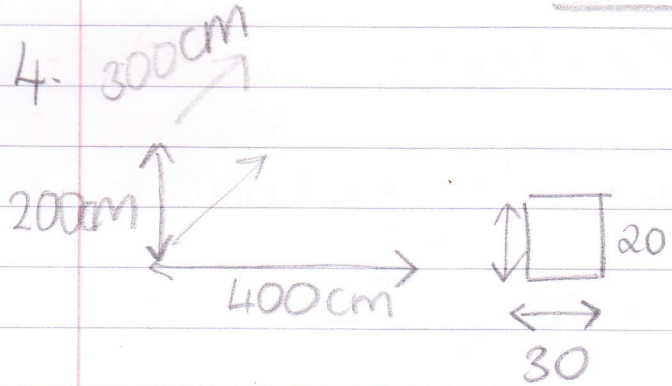
$1.539 \times h = 0.52$

$\div 1.539 \quad \div 1.539$

$h = 0.52 \div 1.539$

$h = 0.34\ cm$

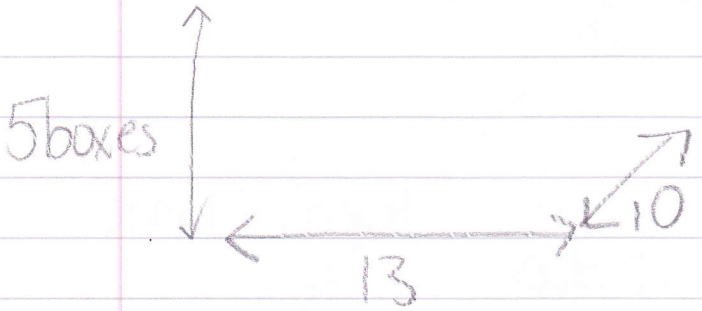


4. 

Stacked vertically $200 \div 40$

$= 5$ boxes

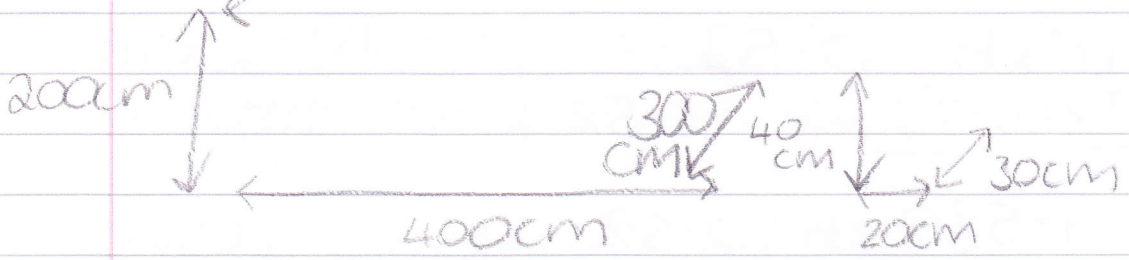
wide 300cm ÷ 20 = 15 boxes wide



13 rows of 15, 5 piles high

= 975 boxes

Or (option 2



400 ÷ 20 = 20 boxes horizontal

20 rows

200 ÷ 40 = 5 boxes high

300 ÷ 30 = 10 boxes wide

20 rows of 10, 5 piles high

⇒ 1000 boxes

Q5. Preheat oven.
read the instructions.
tip contents of packet into a bowl
Add milk + eggs.
Beat the mixture.
place in a cooking dish
cook the cake
Ice the cake when cold

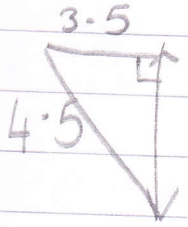
(b) You can preheat oven + read the instructions at the same time

26. (a)

Gradient DE = $\frac{\text{Vert.}}{\text{horiz}}$ Grad FE = $\frac{\text{Vert.}}{\text{horiz}}$

Grad DE = $\frac{?}{3.5}$ grad FE = $\frac{?}{3.5}$

Don't know vertical (?) in either so will need to work this out.



$4.5^2 = 3.5^2 + ?^2$

$20.25 = 12.25 + ?^2$

$?^2 = 8$

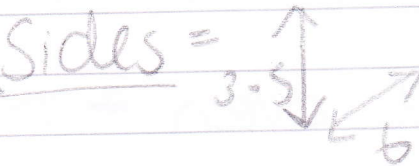
$? = \sqrt{8}$

$? = 2.83m$

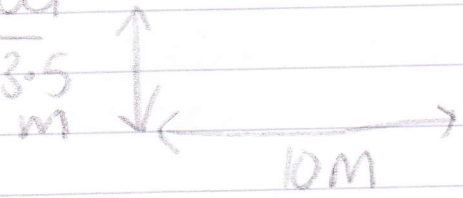
We can do this using Pythagoras

Grad DE $= \frac{2.83}{3.5}$ Gradient FE $= \frac{2.8}{3.5}$

$= 0.81$ $= 0.8$

7.2 Sides = 

$A = 6 \times 3.5$
$= 31 m^2$
$\times 2$ (2 of these)
$= 62 m^2$

Back wall 

$A = 3.5 \times 10$
$= 35 m^2$

Front Total Area ($35 m^2$ (same as back

Need to cut out door + window:

Door $A = 1 \times 2.5$
$= 2.5 m^2$

Window $A = 2.5$
$= 2.5$

Total area front
$\Rightarrow 35 - 2.5 - 2.5$
$= 30 m^2$

Total area of walls $= 127 m^2$

£3·50 × 0·3926
= £1·37