

Over-lap Questions June 2019 Paper 2

20/1 (a) Solve $14n > 11n + 6$

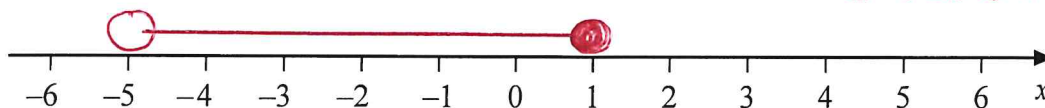
$$3n > 6$$

$$n > 2$$

$$n > 2$$

(b) On the number line below, show the set of values of x for which $-2 < x + 3 \leq 4$

$$-5 < x \leq 1$$



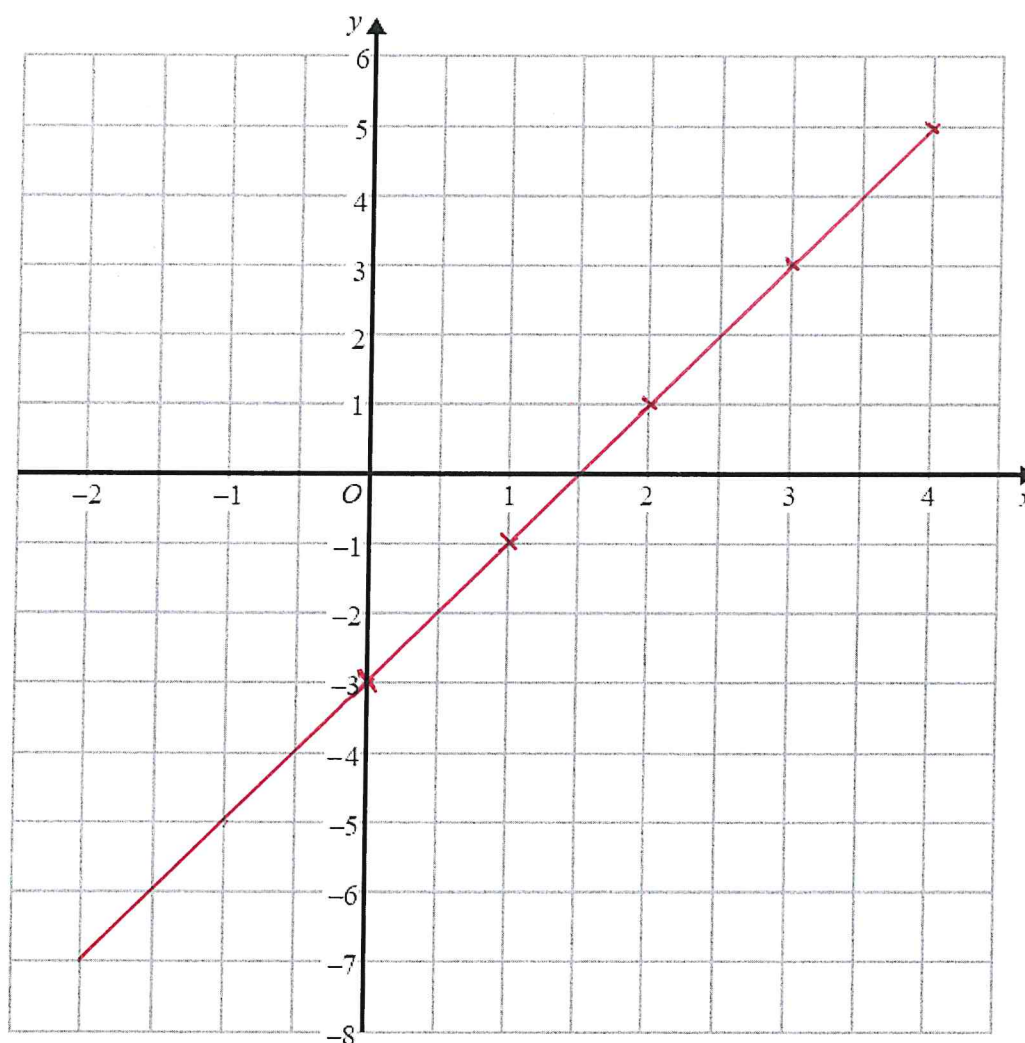
(2)

(3)

21/2 On the grid below, draw the graph of $y = 2x - 3$ for values of x from -2 to 4

$$y = 2x - 3$$

x	y
0	-3
1	-1
2	1
3	3



(3)

- 22/3 Hannah is planning a day trip for 195 students. She asks a sample of 30 students where they want to go. Each student chooses one place. The table shows information about her results.

Place	Number of students
Theme Park	10
Theatre	5
Sports Centre	8
Seaside	7

- (i) Work out how many of the 195 students you think will want to go to the Theme Park.

$$\frac{10}{30} \times 195 = 65$$

- (ii) State any assumption you made **and** explain how this may affect your answer. 65

The sample represents the opinions of all of the students in the same proportions

- 25/6 Sally used her calculator to work out the value of a number y . The answer on her calculator display began

8.3

Complete the error interval for y .

8.3

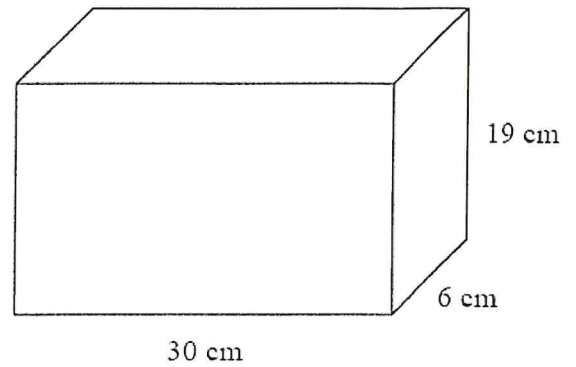
8.39999...

$$8.3 \leq y < 8.4$$

23/4 A container is in the shape of a cuboid.

The container is $\frac{2}{3}$ full of water.

A cup holds 275 ml of water.



What is the greatest number of cups that can be completely filled with water from the container?

$$\text{Volume} = 30 \times 6 \times 19 = 3420 \text{ cm}^3$$

$$\text{Water} = \frac{2}{3} \times 3420 = 2280 \text{ cm}^3$$

$$\text{Cups} = \frac{2280}{275} = 8.290$$

..... 8 full cups
(4)

24/5 ABC is a right-angled triangle.

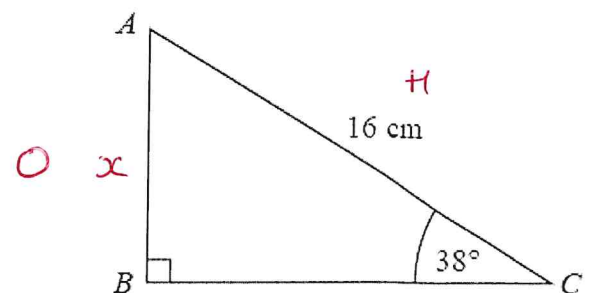
Calculate the length of AB .

Give your answer correct to 2 decimal places.

$$\sin(38) = \frac{x}{16}$$

$$16 \times \sin(38) = x$$

$$x = 9.850583605$$



..... 9.85 cm
(2)

- 26/7 £360 is shared between Abby, Ben, Chloe and Denesh.
The ratio of the amount Abby gets to the amount Ben gets is 2 : 7
Chloe and Denesh each get 1.5 times the amount Abby gets.
Work out the amount of money that Ben gets.

$$A : B : C : D \qquad 2 \times 1.5 = 3$$
$$2 : 7 : 3 : 3$$

$$360 \div 15 = \text{£}24$$

$$\text{Ben} = 7 \times 24$$
$$= \text{£}168$$

£ 168
(4)

- 27/8 (a) Write 0.00562 in standard form.

5.62×10^{-3}
(1)

- (b) Write 1.452×10^3 as an ordinary number.

1452
(1)

TOTAL FOR PAPER IS 25 MARKS