Edexcel spec 1 FP3

FPP → 

Condensed Solutions

F

(1) $5689 \approx \underline{6000}$ (1)

(2) $\frac{30+12}{5+3} = \underline{5.25}$ (1)

Use your calculator

(3) $\frac{1}{0.125} = \underline{8}$ (1)

Reciprocal means "one over"

(4) i/ $\underline{12}$ (1) is a multiple of 4

ii/ $\underline{2}$ or $\underline{5}$ (1) (you only need one)

(5) 1.5 Litres = 1500 ml (1)

250 + (1)

1750 ml (1)

Key fact

1 Litre = 1000 ml

(6) On your reduced version :

a/ will be $\underline{5.7\text{cm}}$ (1) $(\pm 2\text{mm})$

b/ $\underline{35°}$ (1) (You can be out by up to 2°)

(7) a/ $\underline{f=5}$ (1) b/ $\underline{n=12}$ (1) c/ $\underline{d^5}$ (1)

Condensed Solutions

8 $3.4 \times 5.3 \approx 3 \times 5 = 15$ (1)

180.2 is too big. (1) The answer should be approximately 15.

Without doing the calculation!

9 6 spaces (1) $\frac{48}{6} = 8$

one space

$A = -16$ (1)

$B = 32$ (1)

10

n	3n + 2
12	38 (1)
(1) 15	47

$3 \times 12 + 2$

$(47 - 2) \div 3$ (1)

11 a) $3\overline{)343} = 7$ (1)

It's the same number in each box

b) $4^4 = 256$ (1)

12 Yes she is right (1)

$29 = 4 + 25$ (1)

$37 = 1 + 36$ (1)

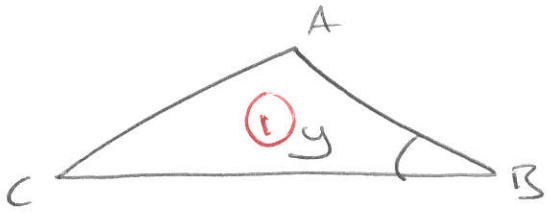
SUM means add

13 32, 26, 20, 14, 8, 2, −4, −10 (1) (1) (1)

count back in sixes

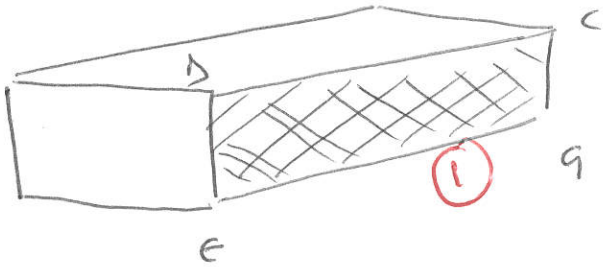
14

a/



(1)

b/



(1)

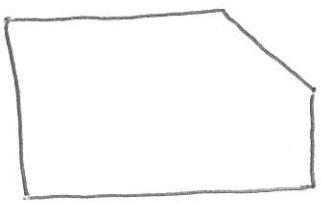
c/ 12 edges

15

	Fibre		Bread
	5g	:	100g
×4	20g	:	400g (1) ← 1 loaf
(1) ÷10	20g	:	10 slices
	2g	:	1 slices (1)

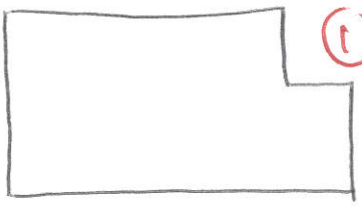
16

i/



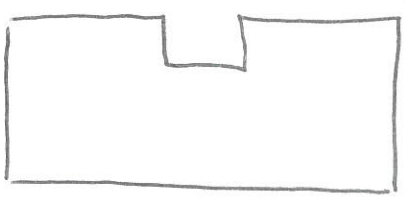
(1) use a digonal

ii/



(1) cut off a corner but not diagonally

iii/

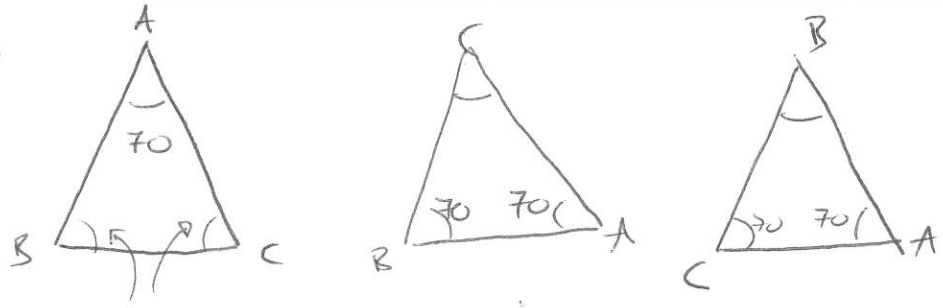


(1) cut a notch.

Other possibilities

FPP 6 — Condensed Solutions

17 a)



Put the 70° in different positions

$B = \frac{180 - 70}{2}$

$= 55°$ (1)

$B = 70°$ (1)

$B = 180 - (70 + 70)$

$= 180 - 140$

$= 40°$ (1)

18 a)

Fruit	Oats
40%	60%
4	6
1 :	1.5

÷10 (1), ÷4

(1)

b) $\frac{3}{4}$ (1)

19

Price for two

$50 \div (3.69 \times 2) = 6.78$ (1)

Buy 2 get 3 → 3 boxes

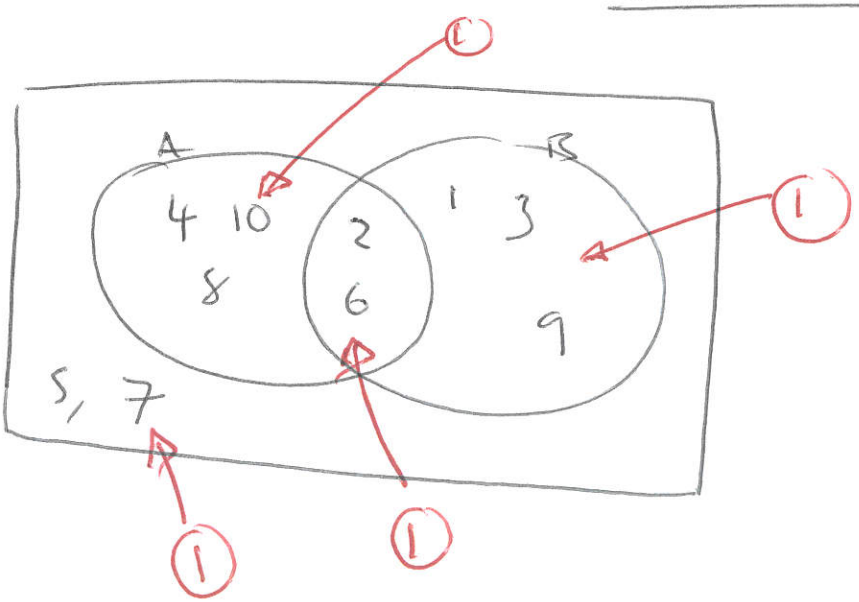
so he can buy 6 lots of (1)

i.e. 18 boxes

This will cost him €44.28 so he has enough money to buy 1 more.

All together he can get 19 boxes (1)

20



Start with

$A \cap B \rightarrow 2, 6$

then

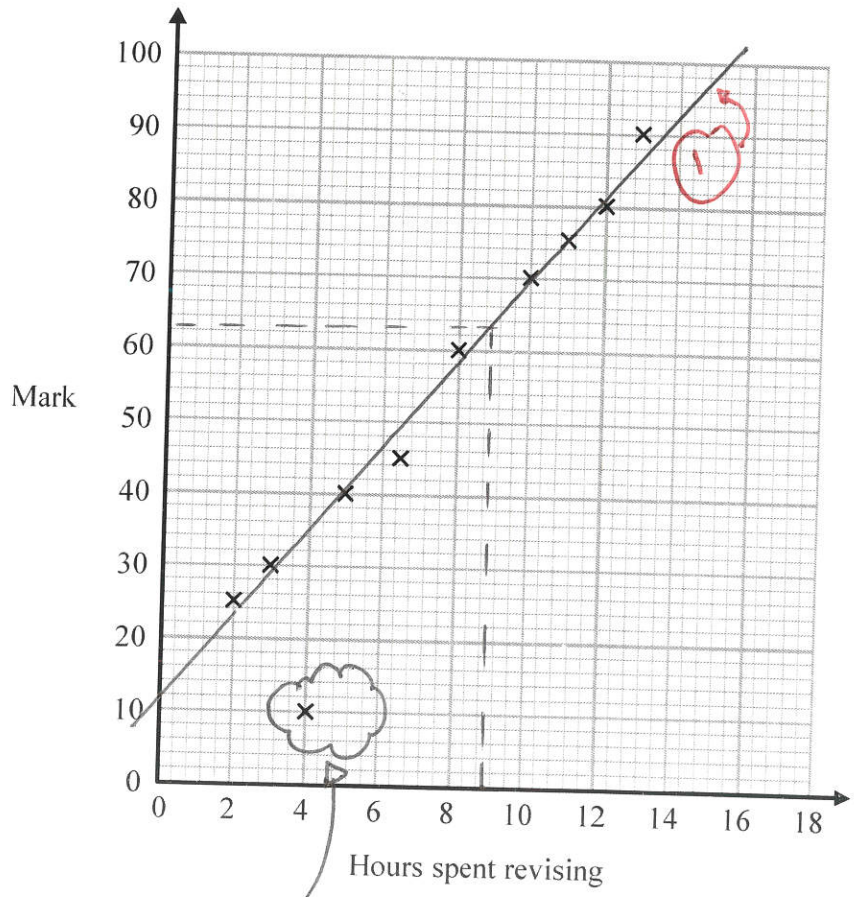
A → multiples of 2

then

B → leftover $A \cup B$

....

21//



a/ (4, 10) (1)

b/ i/ see above

ii/ positive correlation (1)

c/ My estimate is 63 marks (1)

Any estimate between 60 & 70

d/ We don't have any data for anyone that revised that long so her estimate is unreliable. (1)

22// $12.5 \leqslant L < 13.5$ (1) (1)

23// $y = 2x + 1$ (1) (1)

"Read" the gradient & intercept off the graph

(24) a) 24×30
12×34
8×38
6×42

1684 (1)

1684 ÷ 50 = 33.68 (1) (1)

b) About <u>half</u> (1) (2nd) of the belts sold in May were size small. The manager is right (1), she is ordering too many small belts.

(25) a) Area of wall = $\frac{1}{2} \times (1.8 + 2.7) \times 0.8$

Area of trapezium = ½(a+b)h

$= \underline{1.8\ m^2}$ (1)

Area of a tile = 0.15×0.075 (1)

change cm to m!

$= \underline{0.01125\ m^2}$

Tiles needed = $1.8 \div 0.01125 = 160$ (1)

Packs needed = $160 \div 9 = 17.7$ (1)

Karen needs to buy <u>18 packs</u> (1)

b) $160 \times 1.1 = 176$ tiles

increase by 10%

$176 \div 9 = 19.5$ packs. i.e. 20 packs

She needs 2 more packs. (1)

10% of 18 is <u>1.8</u> ≈ 2 packs. (1)

26 $x^2 + 3x - 4 = (x+4)(x-1)$ (1) (1)

	4
-1	x^2 | -4

27 Rearrange to make y the subject

(A) $y = 2x + 4$

(B) $y = \frac{1}{2}x + 2$

(C) $y = -\frac{1}{2}x + 2$

(D) $y = 2x - 4$

(A) & (D) are parallel (1)

(they have the same co-efficient of x).

28 Mass of liquid B $1.1 \times 15 = 16.5\text{g}$

Mass of liquid A $(16.5 \div 3) \times \frac{19}{22} = 4.75$ (1)

$15\text{cm}^3 \div 3 = 5\text{cm}^3$

Total Mass $= 16.5 + 4.75 = 21.25$ (1)

Total volume $= 20\text{cm}^3$

Density C $= \frac{\text{Mass}}{\text{volume}} = \frac{21.25}{20} = 1.0625$ (1)

(1)