Countdown to your final Maths exam …
Higher Tier only … Part 1 (2020)
Integers, Four Operations and Product Rule

	Marks	Actual	☹ 😐 🙂
Q1. Use one calculation to solve similar	3		
Q2. Metric conversions	3		
Q3. Multiply and subtract fractions	3		
Q4. Multiply and subtract mixed fractions	6		
Q5. Product rule	3		
Q6. Combinations	2		
Q7. Proportional reasoning	4		
Q8. Area problem	4		
Q9. Use of calculator / Rounding / Standard form	5		
Q9. Fractions & percentages	4		

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NON-CALCULATOR UNLESS SPECIFIED

Questions

Q1. Using the information that $170.2 ÷ 4.6 = 37$

     write down the value of

(a) $1702 ÷ 4.6$

(1)

(b) $170.2 ÷ 460$

(1)

(c) $3.7 × 4.6$

(1)

Q2. Tony has a hosepipe. The length of the hosepipe is 20 m.

     Tony stores the hosepipe on a reel. The weight of the reel is 1.4 kg.

     ½ metre of the hosepipe has a weight of 150 grams.

     Work out the total weight of the hosepipe and the reel.

(3)

Q3. (a) Work out $\frac{1}{7} × \frac{2}{3}$

(1)

(b) Work out $\frac{3}{5} - \frac{1}{3}$

(2)

Q4. (a) Work out $1\frac{1}{5} × 2\frac{1}{3}$ Give your answer as a mixed number in its simplest form.
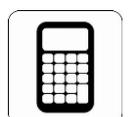
(3)

(b) Work out $2\frac{7}{15} - 1\frac{2}{3}$

(3)

Q5. In a restaurant there are   9 starter dishes , 15 main dishes and 8 dessert dishes

Janet is going to choose one of the following combinations for her meal.

> a starter dish and a main dish
> or a main dish and a dessert dish
> or a starter dish, a main dish and a dessert dish

Show that there are 1335 different ways to choose the meal.

(3)

Q6. Jeff is choosing a shrub and a rose tree for his garden.
At the garden centre there are 17 different types of shrubs and some rose trees.

Jeff says: "There are 215 different ways to choose one shrub and one rose tree."

Could Jeff be correct? You must show how you get your answer.

(2)

Q7. Susie has to deliver some packages and some parcels.

The total number of packages is 4 times the number of parcels.
The total number of packages and parcels is 40

Each parcel has a weight of 1.5 kg.
The total weight of the packages and parcels is 37.6 kg.

Each of the packages has the same weight.

Work out the weight of each package.

(4)

Q8. The diagram shows the plan of a small field.

Kevin is going to keep some pigs in the field.
Each pig needs an area of 36 square metres.

Work out the greatest number of pigs Kevin can
keep in the field.

16 m

6 m

10 m

7 m

(4)
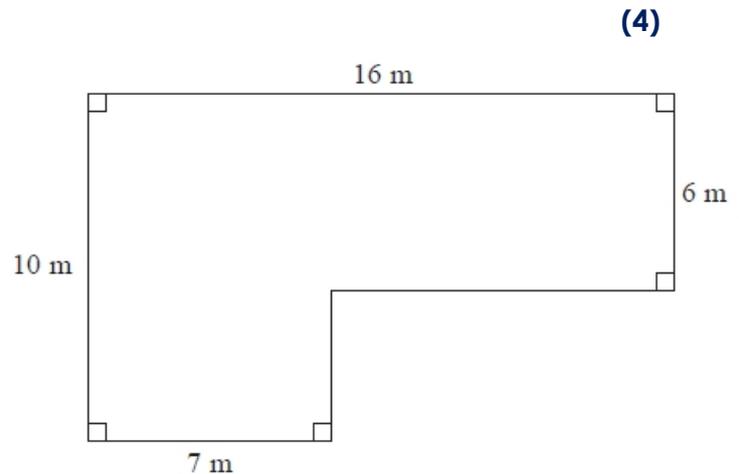
Q9. (a) (i) Use your calculator to work out $\frac{\sqrt{46.2-17.5}}{2.39 \times 0.7}$

Write down all the figures on your calculator display.

(ii) Give your answer to (i) correct to 3 significant figures.

(3)

(b) Work out $(2.34 \times 10^5) \times (5 \times 10^4)$ Give your answer in standard form.

(2)

Q10. There are 200 counters in a bag.
The counters are blue or red or yellow.

35% of the counters are blue.

$\frac{1}{5}$ of the counters are red.

Work out the number of yellow counters in the bag.

(4)