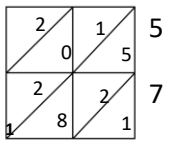
Easter Revision Pack Answers

DAY 1 Skills

1. 4 3



2 4 5 1

b. 40794

2. 7.55 b. 4.83

3. 255 b. 10.5

4. 0.25 b. 17.1

5. 9000 ÷ 9 = 10000 b. 1500 ÷ 0.5 = 3000

6. 27 b. 11

7. -27 b. 19

DAY 1 5 a Day

1. Pate & Beef, Pate & Salmon, Pate & Lasagne
   Melon & Beef, Melon & Salmon Melon & Lasagne
   Ham & Beef, Ham & Salmon, Ham & Lasagne

2. Rectangle Area $12cm^2$ 2cm x 6cm 3cm x 4cm 1cm x 12cm

3. Rectangle Perimeter $10cm^2$ 4cm & 1cm 3cm & 2cm

4. $\sqrt{81} = 9$, $\sqrt{100} = 10$, $\sqrt{36} = 6$, $\sqrt{49} = 7$

5. Angle 'a' = 118^o

DAY 2 Skills

1. 10% = 84 20% = £168 b. £54
2. 48 ÷ 6 x 3 = 18kg b. 30m
3. £10
4. 56% $\frac{14}{25}$
5. 2400 spectator

   Calculator Questions
6. 0.085 x 36 £3.06
7. 1.12 x 2.65 = £299
8. 0.77 x 10500 = £8085
9. $\frac{23}{31}$ x 100 = 74%
10. $\frac{45}{90}$ x 100 = 56.3%

DAY 2 5 a Day

1. 25 x 8 = 200
2. Factors 28 1, 28, 2, 14 4, 7
3. Prime Numbers 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
4. Area Rectangle = 16cm Length Square **= 4cm**
5. Debbie 40%, Salma 35%, Wendy 37.5%

DAY 3 Skills

1. 5p b. a + 9b
2. $15t^2$ b. 6x + 5y
3. W = 4 x 3 + 6 x 4 = 36
4. 5 x -3 + 6 x 2 = -3
5. 5 x 4 = 2P + 3 x 4 P = 4
6. x = 9 b. x = -3
7. x = 6 b. x = 30
8. x = -50 b. x = 2

DAY 3 5 a Day

1. Area 7 x 6 ÷ 2 = $21cm^2$
2. 3 + 5 = 8 320 ÷ 8 = 40 Sian 5 x 40 = £300
3. Square Numbers 1, 4, 9, 16 25, 36, 49, 64, 81, 100
4. $100 = 2^2 \times 5^2$
5. $\frac{1}{36}$

DAY 4 Skills

1. Conversion Graph
    a. A Straight Line graph drawn
    b. 20km per litre ~ 57 miles per gallon
    20km per litre ~ 114 miles per gallon
2. Grouped Frequency Diagram
    a. Median(120 ÷ 2 = 60) $25 < L \leq 30$
    Draw a Bar graph no gaps
3. Scatter diagram
    a. 6 point plotted correctly
    b. Positive correlation ↗
    c. A line drawn through the majority of the points (not through Origin)
    d. 90 customers ~ values between £420 and £450
    e. £500 ÷ 100 = £5

4. Pie Chart
    a. Clothes 60^o $\frac{60}{360}$ x 1620 = £270 b. Bus Fare 20^o £270 – £90 = £180

DAY 5 Skills

1. a. Range 82 – 24 = 58
   b. Mean 416 ÷ 8 = 52
   c. (£15 less each month) Mean = 37 Range = 58

2. Total snowfall (using midpoints)10 x 5 + 20 x 10 + 30 x 12 + 40 x 1 = 650
   Total Number of days = 28
   a. Estimate of Mean snow fall 650 ÷ 28 **= 23cm**
      (ii) Modal class **25 ≤ s < 35**
      (iii) Median Class (28 ÷ 2 = 14th day) **15 ≤ s < 25**
   b. To have a mean of 20 cm with a median of 9 cm, 'there must have been a significant number of days where the snowfall was much greater than 20cm'

3.

3	4	5	5	8

If Mean is 5 then total of all 5 numbers is 5 x 5 = 25
Check Range 8 – 3 = 5 Mean (3 + 4 + 5 + 5 + 8) ÷ 5 = 5

DAY 5 5 a Day

1. 3.60 (Do not accept 3.6)
2. 34, 25, 16, **7, -2**
3. 4.23 ÷ 9 = 0.47 per pack 1.96 ÷ 4 = £0.49 per pack 9 Pack better value
4. 15:07 – 11:52 = 3hr 15min
5. 1mile = 1.6km 250 x 1.6 = 400km

DAY 6 Skills

1. Total cost 1250 + 780 + 900 + 1800 = £4730
   Number of tickets needed to make profit 4730 ÷ 25 = 189.2 **190 Tickets**
2. Building formula C = 12.50 x H + M
   a. C = 12.50 x 23 + 321.20 Cost = **£597.20**
   b. 1877.78 = 12.50 x 98 + M M = **£652.78**
3. Exchange rate
   a. 800 x 1.57 = **$1256**
   b. 199 ÷ 1.57 = £126.75 Nearest £ = **£127**
4. Units Used 2828 – 1514 = **1364**
   Cost / Amount 1364 x 13.3 = 18141.2p = **£181.41**
   VAT (5%) 181.41 x 0.05 = **£9.07**
   Total charge 181.41 + 9.07 = **£190.48**
   Amount to pay 190.48 + 21.15 = **£211.63**
5. Original cost 63 ÷ 0.90 = **£70**
6. Compound Interest 2400 x 0.82^2 = £1613.76
   Sofa has depreciated by £2400 – £1613.76 = **£786.24**

DAY 6 5 a Day

1. Ascending order (up) $\frac{3}{5}$, 0.65, 0.7, 72%, $\frac{3}{4}$
2. 3, 8, 13, 18 nth term = 5n – 2
3. 32 x 0.85 = £27.20
4. Shapes Trapezium, Pentagon, Equilateral triangle
5. Rotational 0 5 3

DAY 7 Skills

1. Triangle 180 – 114 = 66 Quadrilateral 180 – 106 = 74
66 x 2 = 132 180 – 132 **x = 48°** 360 – 74 – 53 – 114 **y = 119°**

2. Triangle 180 – 75 – 50 = 55° **x = 55°** Triangle 180 – 35 – 80 = 65 **y = 115°**

3. Rhombus 180 – (2 x 37) **x = 106°** Parallelogram (Triangle 180 – 33 – 108 = 39°)
60 – 39 **x = 21°**
4. Made up of two triangles 180 + 180 = 360°
5. External angle of a Hexagon 360 ÷ 6 = 60° Internal angle = 120° **x = 30°**
Internal angle of a Pentagon 360 ÷ 5 = 72° Internal angle = 108°
6. Label Internal angles of squares with 90°
Label Internal angles of equilateral triangles with 60°
Sum of angles around point 90 + 60 + 90 + 60 = 300° Gap DCH 360 – 300 = 60°

DAY 8 Skills

1. Overlapping rectangles
    a. Perimeter = 36cm
    b. Area 9 x 3 + 6 x 3 = 45cm^2
2. Area Trapezium 45.6 + 32.4 = 78 78 ÷ 2 x 7.2 = 280.8cm^2
3. Circle
    a. Circumference π x 17 = 53.4cm
    b. Area π x 8.5^2 = 26.98cm^2
4. Area shaded shape

Area Trapezium 55 + 45 = 100 100 ÷ 2 x 30 = 1500cm^2
Area circle π x 10^2 = 314cm^2 Area shaded part = 1500 – 314 = 1186cm^2

DAY 8 5 a Day

1. HCF of 14 and 21 = 7
2. Multiples of 8 40, 48, 56, 64
3. x = 4
4. Obtuse angle between 90° and 180°
Perpendicular meet at 90^0
Parallelogram two pairs of parallel and equal sides
Congruent exactly same shape and size
5. Cuboid 6 faces, Square based Pyramid 5 faces, triangular-based prism 5 faces

DAY 9 Skills

1. Pythagoras
   Height TR $6.3^2 - 3.7^2 = 26$ $\sqrt{26} = 5.099$ Height TR =**5.1m**
2. Length AC $7.3^2 + 3.6^2 = 66.25$ $\sqrt{66.25} = 8.138$ Length AC = **8.1cm**
   Perimeter of triangle 7.3 + 3.6 + 8.= **19cm**
3. Trigonometry
   $Sin\theta = \frac{opp}{hyp}$ $Sin39 = \frac{FG}{14.8}$ FG= Sin39 x 14.8 **FG = 9.3cm**

4. $Tan\theta = \frac{opp}{adj}$ $Tan\theta = \frac{12.8}{18.5}$ Angle RST Tan^{-1} (12.8 ÷18.5) **Angle RST =34.7°**
   Area of triangle RSG 18.5 x 12.8 ÷ 2 = **118.4cm²**

DAY 9 5 a Day

1. Probability black $\frac{4}{12} = \frac{1}{3}$ Prob.(Y & G) = $\frac{3}{12}$ x $\frac{5}{12} = \frac{15}{144}$
2. New Cost of train ticket **£21**
3. $\frac{3}{8} + \frac{1}{4} = \frac{3}{8} + \frac{2}{8} = \frac{5}{8}$
4. 0.3 x 0.3 = 0.09
5. 6.5×10^6

DAY 10 Skills

1. Sample space diagram
   a. Completed grid Missing numbers 4, 8, 12, 16 and 5, 10, 15, 20
   b. P(winning) = $\frac{5}{12}$
      No. of winners = $\frac{5}{12}$ x 60 = **25**
      Income 60 x 0.80 = £48 Pay-out 25 x 1.50 = £37.50 Profit = £10.50

2. Tree Diagram filled correctly
   a. 0.3 and 0.7 on braches
   b. P(winning exactly once) Win and Lose or Lose and Win
      0.3 x 0.7 + 0.7 x 0.3 = **0.42**

DAY 10 5 a Day

1. Angle 'b' 180 – 120 = 60 60 ÷ 2 = 30°
2. P = 2 x 4 + 2 x 5 = 18
3. $\frac{1}{10}$ 0.1 10% $\frac{5}{100}$ or $\frac{1}{20}$ 0.05 5% ¾ 0.75 75%
4. 28 x 47 = **1316**
5. Coordinates triangle (8, 1) Vector translation B to A $\begin{pmatrix} -4 \\ 3 \end{pmatrix}$

DAY 11 Skills

1. 4x + 28 b. $3x^2$ - 6x
2. 3x – 15 + 2x + 16 b. 4x + 24 – 6x – 8
   5x + 1 -2x + 16
3. 4(x + 3) b. 3x(x + 4)
4. 3x + 18 = 39 b. 4x – 8 = 14
   3x = 21 **x = 7** 4x = 22 **x = 5.5**
5. 2x – 2 = 2 b. 8x – 14 = 3x + 21
   2x = 4 **x = 2** 5x = 35 **x = 7**
6. x^2 + 5x + 3x + 15 b. x^2 – 6x + 4x – 24
   x^2 + 8x + 15 x^2 – 2x – 24
7. (x + 4)(x + 3) b. (x + 8)(x – 2)
8. (x + 9)(x + 2) = 0 b. (x – 5)(x + 4) = 0
   x = -9 or x = -2 x = 5 or x = -4
9. a. g^{10} b. a^5 c. y^5 d. $(x + 4)^2$

DAY 11 5 a Day

1. $\frac{1}{3}$ of $\frac{1}{5}$ of 60 = 4
2. £340 + £34 = £374
3. Square number = 16, Multiple of 7 = 21, Factor of 30 = 15, Cube number = 8
4. a. Arc, b. Chord, c. Radius, d. Tangent
5. 14.3 – 8.65 = 5.65

DAY 12 Skills

1. x^3 – 7x – 75 = 0
   x = 4.5 4.5^3 – 7 x 4.5 – 75 = -15.375 too small
   x = 4.6 -9.864 too small x = 4.7 -4.077 too small x = 4.8 1.992 too big
   x = 4.75 -1.078 too small **x = 4.8 to 1 decimal place**

2. y = -2x + 8 Negative graph correct coordinates plotted

X	0	1	2	3	4
y	8	6	4	2	0

   Passes through the origin (0, 0) B: y = 5x (no 'c' value)
   Parallel to y = 3x + 7 D: y – 3x = 4 (gradient 3)
   Intersect the y-axis at y = 5 E: x + y – 5 = 0 (crosses y axis at 5)

DAY 12 5 a Day

1. Volume 12 x 4 x 4 = 192cm^2
2. 360 ÷ 12 = 30 Ant 9 x 30 = £270 Dec 3 x 30 = £210
3. A 3 by 6 triangle with corner coordinate of (3,3)
4. 45 ÷ 80 x 100 = 56%
5. n^2 + 2 Term1 1^2 + 2 = 3 Term2 2^2 + 2 = 6 Term3 3^2 + 2 = 11