TEST 8

SECTION 1

1) 6 098 427

2) $5^2 = 5 \times 5 = 25$

3) $\frac{7}{20} \times \frac{100}{1} = 35\%$

4) $\$2,100 \div 35 = \$60$ for 1 book
   5 books $= \$60 \times 5 = \$300$

5) $1.44 \div 1.2 =$ $12\overline{\smash{)}14.4}$ $= 1.2$
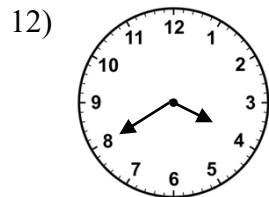
6) $6.057\text{kg} = 6057\text{g}$

7) $\frac{\sqrt{36}}{3} = \frac{6}{3} = 2$

8) $8 - \frac{2}{3} = 7\frac{3}{3} - \frac{2}{3} = 7\frac{1}{3}$

9) $316 \times 15 = 4,740$

10) $\$100 + \$50 + \$20 + \$3 + 0.50c = \$173.50$

11) $5,200$
    $- \underline{796}$
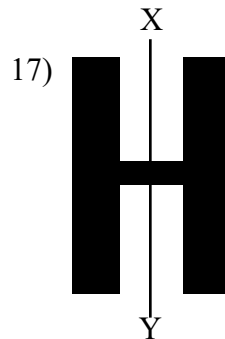 $4,404$

12)

13) 10 m

14) $6.4 \times 6 = 38.4\text{cm}$

15) Rectangular Based Pyramid

16) 39kg

17)

18) Mean = 16
    Total $= 16 \times 5 = 80$
    Missing No. $= 80 - (24 + 12 + 7 + 10)$
                $= 80 - 53 = 27$

19) 1 Rotation = 4-90° turns
    2 Rotations $= 4 \times 2 = 8$-90° turns
    ½ Rotation = 2-90° turns
    Total $= 8 + 2 = 10$-90° turns

20) $36 - (12 + 10 + 3) = 36 - 25 = 11$
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SECTION 2

21) Area of 1 box $= 3\text{cm} \times 3\text{cm} = 9\text{cm}^2$
    Area of figure $= 6$ boxes $\times 9\text{cm}^2 = 54\text{cm}^2$

22) Mean
    $= (15.02+18.25+14.93+20.18+13.07) \div 5$
    $= 81.35 \div 5 = 16.27$ mins

23) Andrew - $60 + $40
Paul - $40
Jim –

$60 + $40 + $40 = $140
$200 – $140 = $60
$60 ÷ 3 = $20

Andrew = $100 + $20 = $120
Paul = $40 + $20
Jim = $20

24) Scale = 9.15kg
Each Side = 9.15kg ÷ 2 = 4.575kg
1 Corn = 375g
3 Corn = 375g × 3 = 1125g
2 Sugar = 4575g – 1125g = 3450g
1 Sugar = 3450g ÷ 2 = 1725g

5 cans = 375g × 5 = 1,875g
2 Flour = 4575g × 2 = 9,150g
3 Sugar = 1725g × 3 = 5,175g
Total Weight = 16,200g = 16.2kg

25) 0.65 + 0.5 = 1.15
1.15 + 0.6 = 1.75
1.75 + 0.7 = 2.45
2.45 + 0.8 = 3.25
2.25 + 0.9 = 4.15
4.15 + 1.0 = 5.15

26) If the divisor is 16 the largest whole
number that can be a remainder is 15.
If the remainder is more than 15 we can
get another group with 16 in the group.

27) Discount = 15%
Sale Price = 100% – 15% = 85% = $\frac{85}{100}$
$\frac{85}{100}$ = $3,825
∴ Original Price = $\frac{100}{85} \times \frac{3825}{1}$ = $4,500

28) Peter = 465 marbles
David = 465 – 15 = 450 marbles
Sue = 450 – 126 = 324 marbles
Total Marbles = 465 + 450 + 324
= 1,239
Equal Amount per child = 1,239 ÷ 3
= 413 marbles
Peter = 465–413 = 52 marbles to give Sue
David = 450–413 = 37 marbles to give Sue

29) 10 laps = 560m
∴ 1 lap = 560 ÷ 10 = 56m
Peri. Of Square Park = 56m
1 Side Park = 56m ÷ 4 = 14m
Area of Park = 14m × 14m = 196m^2

30) 150 boxes × 10 pencils = 1,500 pencils
Seniors = $\frac{2}{5} \times \frac{1,500}{1}$ = 600 pencils
Remaining Pencils = 1,500 – 600 pencils
= 900 pencils
Infants = 0.5 = $\frac{1}{2} \times \frac{900}{1}$ = 450 pencils
Std. 4 = 60% of pencils = $\frac{60}{100} \times \frac{600}{1}$
= 360 pencils
Std. 4 = 360 ÷ 5 pencils = 72 pupils
Infant Pupils = 72 × 2 = 144
Pencils Needed for Infants = 144 × 5
= 720 pencils
Extra Pencils Needed for Infants
= 720–450 = 270 pencils

31) 0.3 + 40% + $\frac{1}{8}$ = 30% + 40% + 12½%

= 82½%

32) Volume filled in Cube = 4m × 4m × 2m
= 32m^3
Litres = 32m^3 × 1,000 Lit. = 32,000 Litres
Volume filled in Cuboid = 3m × 7m × 4m
= 84m^3
Litres = 84m^3 × 1,000 Lit. = 84,000 Litres
Diff. In Capacity = 84,000 – 32,000
= 52,000 Litres

33) Discount = Original Price – Sale Price
$\qquad$ = $6,900 – $4,600 = $2,300

34) (i) Equilateral Triangle
$\quad$ (ii) Scalene Triangle
$\quad$ (iii) Isosceles Right Angled Triangle

35) S.I. $= \dfrac{Prin. \times Rate \times Time}{100}$
$\quad = \dfrac{\$30,000 \times 12 \times 5}{100} = \$18,000$
$\quad$ Total To Repay = $30,000 + $18,000
$\qquad\qquad\qquad = \$48,000$
$\quad$ Monthly Instal. = $48,000 ÷ 60 = $800
$\quad$ Amount Repaid after 35 months
$\quad = \$800 \times 35 = \$28,000$

36) Triangular Prism
$\quad$ No. of Edges – 9

37) Mathematics $\quad$ = 95%
$\quad$ Grammar $\qquad$ = 85%
$\quad$ Creative Writing = 85%
$\quad$ Spelling $= \dfrac{15}{50} \times \dfrac{100}{1} = 30\%$

$\quad$ Roger can spend more study time on
$\quad$ Revision of his Spelling

38)
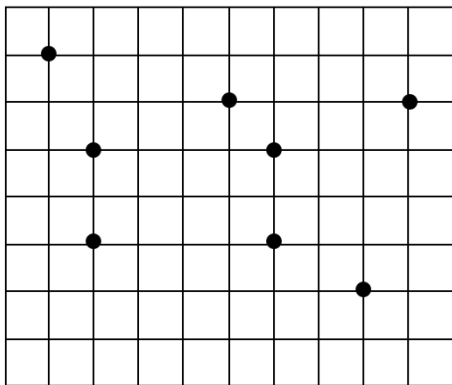
39)
14 × $100	=	$1,400
9 × $50	=	$ 450
26 × $20	=	$ 520
19 × $10	=	$ 190
12 × $1	=	$ 12
60 × .25c	=	$ 15
Total Deposited		$2,587

40) Mean = 16
$\quad$ Total = 16 × 5 = 80
$\quad$ Fourth and Fifth number
$\quad$ = 80 – (18 + 22 + 19) = 80 – 59 = 21
$\quad$ Fourth and Fifth number = 21 ÷ 2
$\qquad\qquad\qquad\qquad\qquad = 10.5, 10.5$

SECTION 3

41) Option A $= \dfrac{\$120,000 \times 8 \times 7}{100} = \$67,200$
$\quad$ Total To Repay = $120,000 + $67,200
$\qquad\qquad\qquad = \$187,200$

$\quad$ Option B $= \dfrac{10}{100} \times \dfrac{\$120,000}{1} = \$12,000$
$\quad$ Remaining Balance $= \dfrac{\$108,000 \times 6 \times 7}{100}$
$\qquad\qquad\qquad = \$45,360$
$\quad$ Total Paid = $12,000+$108,000+$45,360
$\qquad\qquad\qquad = \$165,360$

$\quad$ Jerry should choose Option B

42)
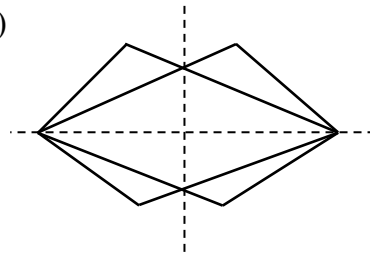
43) Peri. Of Shape = (24cm + 15cm) × 2
$\qquad\qquad$ = 78cm
Unlike finding the Area of the shape, the
Distance around the shape will still have
The same 2 lengths and the same 2 widths

44) Jack Hammer = $350 per day
Power Drill = $200 per day
Transport = $250

Total Bill = $4,150
Power Drill = 3 extra days = $200 × 3
$\qquad\qquad\qquad\qquad\qquad$ = $600
Transport + Extra Days for Drill
= $250 + $600 = $850
Total Bill − Extra Cost
= $4,150 − $850 = $3,300
Drill plus Hammer per day
= $350 + $200 = $550
∴ No. of days Hammer rented
= $3,300 ÷ $550 = 6 days

45) Comprehension = 200 ÷ 5 = 40
$\qquad\qquad\qquad = \frac{40}{200} \times \frac{100}{1} = 20\%$
Music + Story = 200 − (20 + 40 + 50)
$\qquad\qquad\qquad = 200 − 110 = 90$ books

Music is 10 more books than Story book
∴ 90 − 10 = 80 books left
80 ÷ 2 types of books = 40 books
Music = 10 + 40 = 50 books
$\qquad = \frac{50}{200} \times \frac{100}{1} = 25\%$
Story = 40 books $= \frac{40}{200} \times \frac{100}{1} = 20\%$