Selective Schools

Mathematics Practice Test
MA-08

Note ... Correct Answers are provided on a single sheet (as page 8)
There is a blank Answer sheet supplied (as page 9)
There are 40 multiple-choice questions
Only choose one of the answers **a**, **b**, **c** or **d** at each question
The time allowed is **40 minutes**.

*** circle the letter of the best answer to each question on your answer sheet.**

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1 What is $\frac{13}{20}$ when expressed as a decimal? **a** $1 \cdot 3$ **b** $0 \cdot 13$ **c** $2 \cdot 6$ **d** $0 \cdot 65$

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2 Which of these numbers has the lowest value? **a** 43% **b** $\frac{2}{5}$ **c** $\frac{1}{2}$ **d** $0 \cdot 42$

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3 A student studies seven subjects.
His average mark for six subjects is 72%.
His mark in the seventh subject was 100%.
What is his average for the seven subjects? **a** 76% **b** 74% **c** 82% **d** 78%

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4 What is the total length of the edges of a rectangular prism, measuring $4\text{cm} \times 3\text{cm} \times 5\text{cm}$?
a 24 cm **b** 40 cm **c** 48 cm **d** 60 cm

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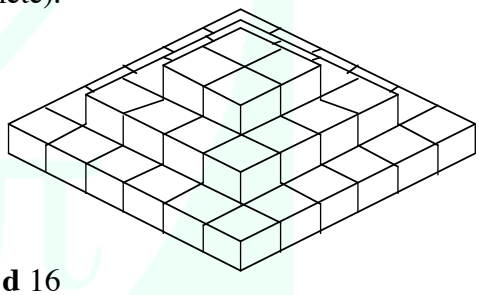
5 Look at this stack of cubes (each row is complete).



If you could look at it from **ALL** sides, how many cubes would be completely hidden from view?
a 0 **b** 4 **c** 8 **d** 16

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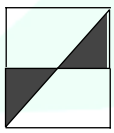
6 What percentage of this square is shaded?



a 20% **b** 25% **c** $33 \cdot 33\%$ **d** 50%

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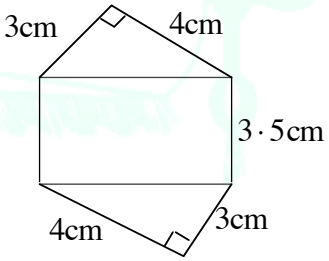
7 The rectangular part of this shape has an area of $17 \cdot 5$ square cm.



What is the area of the complete shape?
a $41 \cdot 5\ \text{cm}^2$ **b** $31 \cdot 5\ \text{cm}^2$
c $39 \cdot 5\ \text{cm}^2$ **d** $29 \cdot 5\ \text{cm}^2$

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8 Each month, a man saves $\frac{4}{9}$ of his income and spends \$600.
What is his total income for a year? **a** \$13160 **b** \$12000 **c** \$12960 **d** \$11000

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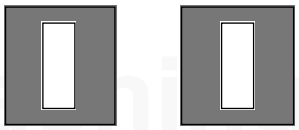
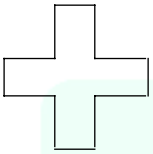
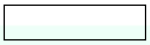
9 Matt makes two identical cardboard squares with slits as shown here below.

He rotates the second square through 90°.
He then places one on top of the other
without changing the direction of the slits.



What is the shape of the opening ?

a  **b**  **c**  **d** 

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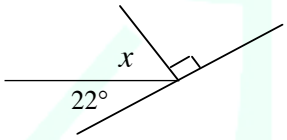
10 What is the value of the angle marked x ?

a 58° **b** 68° **c** 45° **d** 90°



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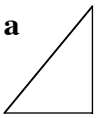
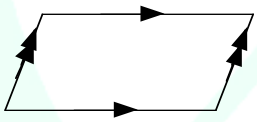
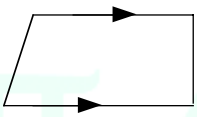
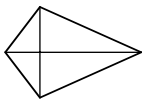
11 Which one of these figures has both parallel sides and perpendicular sides?

a  **b**  **c**  **d** 

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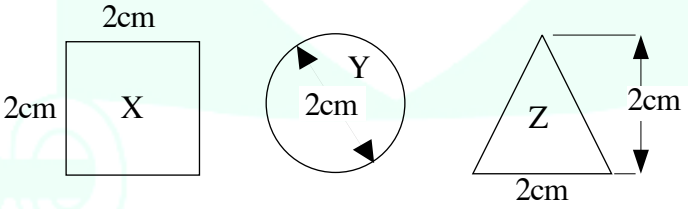
12 Look at the three shapes, X, Y and Z, in this diagram :



Which one of these statements is true?

a only Z fits in X
b only Y fits in X
c either Y or Z fits in X
d Y fits in Z which fits in X

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13 Jean owned $\frac{3}{8}$ of a hairdressing business.
The business was sold for a profit of $62000.
How much did she receive from the sale of the business?

a $38750 **b** $31000 **c** $7750 **d** $23250

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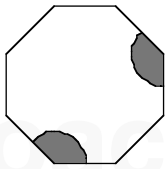
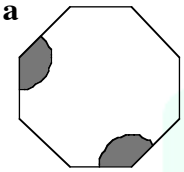
14 When this shape is viewed in a mirror,

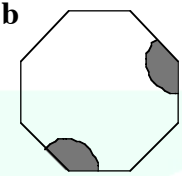


what does it look like :

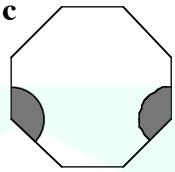
a



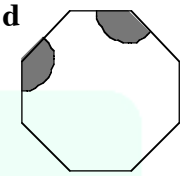
b



c



d



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15 A train leaves a station at 21:15 and arrives at its destination at 2:35 pm the next day.

How long does it take for the journey? **a** 11 hrs 50 mins **b** 17 hrs 20 mins
c 5 hrs 20 mins **d** 6 hrs 40 mins

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16 A student finds the sum, difference, product and quotient of the numbers 24 and 3.
She then adds all four answers together.

What is her answer? **a** 157 **b** 152 **c** 128 **d** 123

---

17 A collector purchased a painting for \$50000, then sold it 2 years later for a profit of 20%.

For how much did the collector sell the painting? **a** \$70000 **b** \$60000
c \$55000 **d** \$625000

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18 A large bag of sugar weights 5 kg.

How many smaller packets,
each weighing 125 g when full, can be filled from the larger bag?

a 40 **b** 50 **c** 8 **d** 45

---

19 The circumference of a circle measures $25 \cdot 12$cm. Remembering that the formula for finding the circumference is πd, what is the diameter of this circle?

a $6 \cdot 2$ cm **b** $4 \cdot 4$ cm **c** 8 cm **d** 10 cm

---

20 T and V in the four-digit number, T37V, represent different digits and T37V is divisible by 88, without remainder.

What digit is represented by T? **a** 4 **b** 1 **c** 9 **d** 2

---

21 What is the product of the first four odd numbers? **a** 16 **b** 35 **c** 945 **d** 105

---

22 $5+5-5\times5\div5=$ **a** 5 **b** 10 **c** 25 **d** 6

---

23 There are five cards with numbers written on them as shown

2	5	6	7	9

Two of them are drawn at a time and put together to form fractions.
How many *proper* fractions can be formed? **a** 4 **b** 7 **c** 10 **d** 20

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24 Which of these numbers is not a prime number? **a** 31 **b** 41 **c** 51 **d** 61

---

25 A wheel has a circumference of $7\cdot2$m. How many turns does it make in travelling 100m?
a $10\cdot5$ turns **b** $13\cdot9$ turns **c** $15\cdot8$ turns **d** 12 turns

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26 Each month a woman saves $\frac{2}{7}$ of her income and spends \$800.

What is her yearly income? **a** \$13440 **b** \$1120 **c** \$15360 **d** \$6857

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27 5 kg of flour costs $\$12\cdot50$ and 3 kg of sugar costs $\$3\cdot60$.
What is the total cost of 3 kg of flour and 4 kg of sugar?
a \$15 **b** $\$8\cdot70$ **c** $\$16\cdot10$ **d** $\$12\cdot30$

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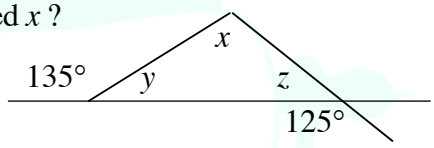
28 In this diagram, what is the value of the angle marked x ?

a 80° **b** 90° **c** 70° **d** 45°



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29 A salesperson receives a commission of 5% of all sales.
On one weekend she sells 4 computers, each priced at \$2000, and 5 printers at \$200 each.

What is her total commission at the end of the weekend?
a \$150 **b** \$300 **c** \$450 **d** \$475

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30 A student scores an average of 83% over six Mathematics tests.

What percentage score must the student get in the next test to achieve an average of 86%.
a 86% **b** 96% **c** 98% **d** it is not possible to achieve this average

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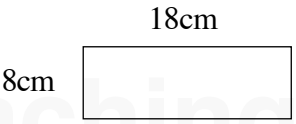
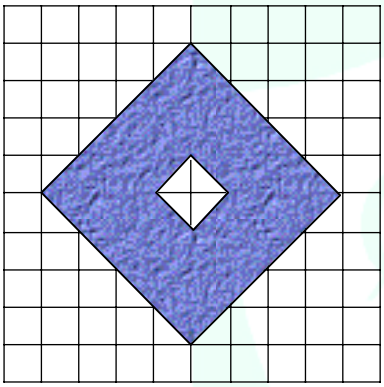
31 This diagram represents a rectangle 18 cm by 8 cm.



How long would be the side of a square with the same area as this rectangle?

a 9 cm **b** 12 cm **c** 13 cm **d** 16 cm

32



What is the area of the shaded part of this diagram?
Each square represents 1cm by 1cm

a 32 cm^2
b 30 cm^2
c 64 cm^2
d 40 cm^2

---

33 I am a square number. If one is added to me, the answer is a prime number.

Which of these numbers am I? **a** 6 **b** 25 **c** 40 **d** 36

---

34 A traveller leaves Melbourne at 6 am for a trip to Sydney.
He travels for a total of 12 hours, plus he has two meal breaks each of 40 minutes.

At what time does he arrive in Sydney? **a** 19:20 **b** 18:40 **c** 19:40 **d** 7pm

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35 The digits of the number 4179 are reversed to form a new number.
The smaller four-digit number is then subtracted from the larger.

What is the answer? **a** 5355 **b** 9714 **c** 5535 **d** none of these answers

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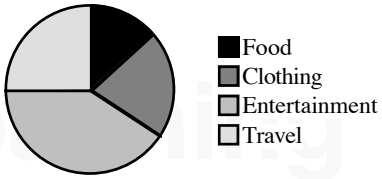
The next two questions refer to this pie graph



not drawn to scale.

36 In August, James spent \$20 on Food, \$40 on Clothing, \$25 on Entertainment and \$5 on Travel. This information is shown on the pie graph .

What is the sector angle for clothing? **a** 40° **b** 20° **c** 160° **d** 180°

37 By how many degrees is the sector angle for Entertainment larger than the sector angle for Food?

a 5° **b** 20° **c** 10° **d** 40°

---

38 A carpenter hit a nail which was $5\frac{1}{2}$ cm long through a piece of wood $2\frac{3}{4}$ cm thick and into another large piece of wood.

How far did the nail go into the large piece of wood?

a $2\frac{3}{4}$cm **b** $2\frac{1}{2}$cm **c** $3\frac{1}{4}$ cm **d** 2 cm

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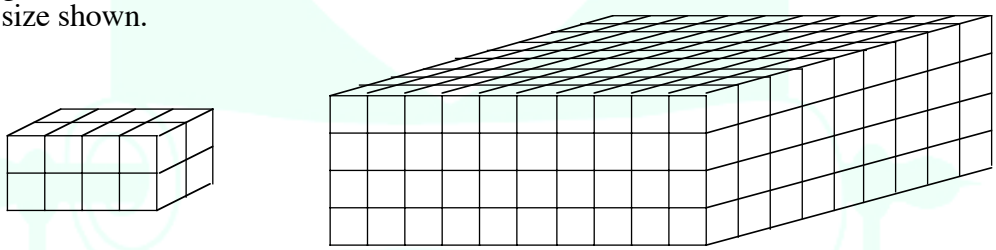
39 The big cuboid is cut into smaller cuboids of the size shown.



Without any rejoining, how many smaller cuboids can be made?

a 24 **b** 20 **c** 16 **d** 15

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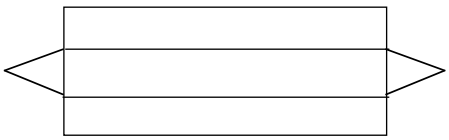
40 Which solid is formed from this net?

a cube **b** triangular prism
c rectangular prism **d** triangular pyramid



---------- This is the End of Test MA-08 ----------

Master Coaching

1	a	b	c	(d)	**21**	a	b	c	(d)
2	a	(b)	c	d	**22**	(a)	b	c	d
3	(a)	b	c	d	**23**	a	b	(c)	d
4	a	b	(c)	d	**24**	a	b	(c)	d
5	a	(b)	c	d	**25**	a	(b)	c	d
6	a	(b)	c	d	**26**	(a)	b	c	d
7	a	b	c	(d)	**27**	a	b	c	(d)
8	a	b	(c)	d	**28**	(a)	b	c	d
9	a	(b)	c	d	**29**	a	b	(c)	d
10	a	(b)	c	d	**30**	a	b	c	(d)
11	a	b	(c)	d	**31**	a	(b)	c	d
12	a	b	(c)	d	**32**	a	(b)	c	d
13	a	b	c	(d)	**33**	a	b	c	(d)
14	(a)	b	c	d	**34**	(a)	b	c	d
15	a	(b)	c	d	**35**	a	b	(c)	d
16	a	b	(c)	d	**36**	a	b	(c)	d
17	a	(b)	c	d	**37**	a	(b)	c	d
18	(a)	b	c	d	**38**	(a)	b	c	d
19	a	b	(c)	d	**39**	a	b	c	(d)
20	a	b	c	(d)	**40**	a	(b)	c	d

Date : _____

Name : _____

Score : _____

* Circle the letter of the best answer to each question ... for example **1** a b © d

1	a	b	c	d	**21**	a	b	c	d
2	a	b	c	d	**22**	a	b	c	d
3	a	b	c	d	**23**	a	b	c	d
4	a	b	c	d	**24**	a	b	c	d
5	a	b	c	d	**25**	a	b	c	d
6	a	b	c	d	**26**	a	b	c	d
7	a	b	c	d	**27**	a	b	c	d
8	a	b	c	d	**28**	a	b	c	d
9	a	b	c	d	**29**	a	b	c	d
10	a	b	c	d	**30**	a	b	c	d
11	a	b	c	d	**31**	a	b	c	d
12	a	b	c	d	**32**	a	b	c	d
13	a	b	c	d	**33**	a	b	c	d
14	a	b	c	d	**34**	a	b	c	d
15	a	b	c	d	**35**	a	b	c	d
16	a	b	c	d	**36**	a	b	c	d
17	a	b	c	d	**37**	a	b	c	d
18	a	b	c	d	**38**	a	b	c	d
19	a	b	c	d	**39**	a	b	c	d
20	a	b	c	d	**40**	a	b	c	d