Year 7 Numeracy (Calculator allowed) Practice Test 7

1   Solve the following equation.

17 – [17 – (17 - 9)] = _____

9	7	8	10
Ⓐ	Ⓑ	Ⓒ	Ⓓ

2   27 - (9 ÷ 3) x 2 = _____

20	21	18	16
Ⓐ	Ⓑ	Ⓒ	Ⓓ

3   Which is false?

Ⓐ 27 ÷ 3 x 4 = (27 ÷ 3) x 4
Ⓑ 6 x 4 ÷ 3 = 6 x (4 ÷ 3)
Ⓒ 4 x 7 x 9 = (9 x 4) x 7
Ⓓ 4 ÷ 5 x 2 = 4 ÷ (5 x 2)

4   Solve the following expression.

$2^2 + 2^3 + 2^4$ = _____

28	16	24	14
Ⓐ	Ⓑ	Ⓒ	Ⓓ

5   Jack wanted to multiply 0.012 and 1.5 using a calculator but he forgot to enter the decimal points and got 180 as answer. If he places the decimal points properly, what answer would Jack get?

1.8	0.81	0.018	0.0018
Ⓐ	Ⓑ	Ⓒ	Ⓓ

6   A number in base 2 system can be written in base 10 by expressing the number as powers of 2. e.g. 101_2 = (1 x 2 x 2) + (0 x 2) + (1 x 1) = 5_{10}
Convert 1010101_2, a base 2 number, into a base 10 number.

86	85	83	84
Ⓐ	Ⓑ	Ⓒ	Ⓓ

7	Convert the answer of the following base 2 numbers into a base 10 number.

$100110_2 + 110101_2 =$

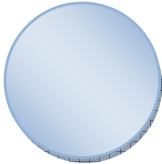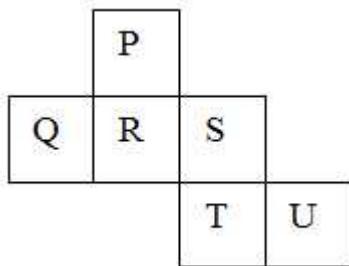| 92	93	94	91
Ⓐ	Ⓑ	Ⓒ	Ⓓ

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8   Here is a circle.

The radius of the circle is 7 cm. What is the area of the circle?

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9   Anna wrote some alphabet letters on a card and folded the card to form a cube. Which letter will appear on the opposite face of 'R'?

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        P
    Q   R   S
            T   U
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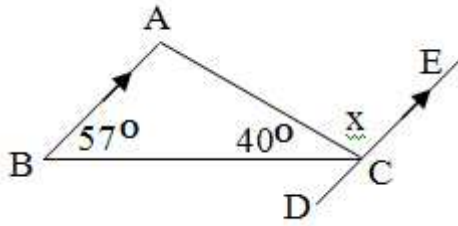
T	S	U	P
Ⓐ	Ⓑ	Ⓒ	Ⓓ

10   Two lines, AB and CD, are parallel to each other.

What is the value of the angle in degrees shown by x?

| 25 degrees | 30 degrees | 40 degrees | 83 degrees |
| Ⓐ | Ⓑ | Ⓒ | Ⓓ |

11   Two lines, AB and CD, are parallel to each other.
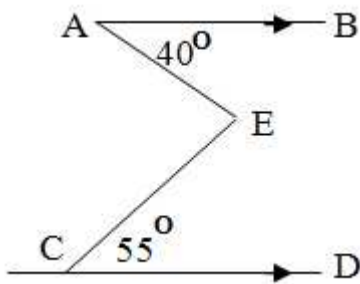
What is the value of angle CEA?

| 95 degrees | 200 degrees | 85 degrees | 265 degrees |
| Ⓐ | Ⓑ | Ⓒ | Ⓓ |

12   What is the complement and supplement of 70 in degrees?

| Non of these | 20 and 290 | 20 and 110 | 110 and 290 |
| Ⓐ | Ⓑ | Ⓒ | Ⓓ |

13   On average each sample of ore from a gold mine contains 12% gold. How much gold is expected from 2000 kg of ore?

| 24 Kg | 120 Kg | 240 Kg | 600 Kg |
| Ⓐ | Ⓑ | Ⓒ | Ⓓ |

3

14	In a school 40 boys and 10 girls entered a competition. Prizes were awarded to 25% of the boys and 20% of the girls. What percentage of entrants received prizes?

24%　　　　　　　30%　　　　　　　35%　　　　　　　45%

Ⓐ　　　　　　　　Ⓑ　　　　　　　　Ⓒ　　　　　　　　Ⓓ

15	At a car factory, each assembly line manufactures 8 cars every 10 minutes. If there are 7 assembly lines, how many cars are manufactured each hour?

(8 x 60/10) x 7　　(8 x 10/60) x 7　　　8 x 10 x7　　　　(8 x 10/7)

Ⓐ　　　　　　　　Ⓑ　　　　　　　　Ⓒ　　　　　　　　Ⓓ

16	How many axes of symmetry does the star have?

6　　　　　　　　8　　　　　　　　2　　　　　　　　4

Ⓐ　　　　　　　　Ⓑ　　　　　　　　Ⓒ　　　　　　　　Ⓓ

4

17 Angles of size A, B, X and Y are shown. Which is the expression that always gives the value of X?
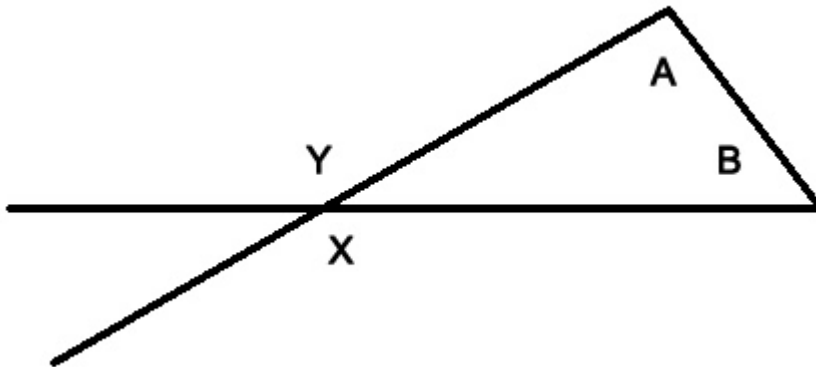
(A) X = 180 – (A+B)
(B) X = 360 – (A+B)
(C) X = A + B
(D) X = 90 – (A+B)

18 Here is a map of a garden. Find the area of the garden.
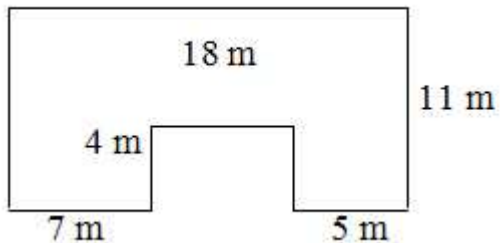
(A) 174 metres squared
(B) 126 metres squared
(C) 198 metres squared
(D) 145 metres squared

19 Convert 75 minutes to hours.

1.25 hours	1.30 hours	1.15 hours	1.5 hours
(A)	(B)	(C)	(D)

20 The local time of two cities is shown in the table.

Perth	7 PM
Calcutta	4:30 PM

When it is midnight in Perth, what will be the local time in Calcutta?

2:30 PM   9:30 AM   2:30 AM   9:30 PM
Ⓐ   Ⓑ   Ⓒ   Ⓓ

21 A 5 litres container full of orange juice has 2 litres of juice removed and is filled up with water and mixed thoroughly. It then has 2 litres of mixture removed and is again filled up with water. What percentage of the final mixture is orange juice?

30%   33%   36%   27%
Ⓐ   Ⓑ   Ⓒ   Ⓓ

22 Here is a table showing details of tides in Sydney.

Day	High	Low
7 March	0025 (1.62 m) 1326 (1.32 m)	0709 (0.37 m) 1908 (0.61 m)
8 March	0125 (1.53 m) 1424 (1.42 m)	0759 (0.38 m) 2018 (0.61 m)
9 March	0225 (1.45 m) 1522 (1.51 m)	0849 (0.39 m) 2134 (0.57 m)

If 7th March was on Sunday then when was the first high tide on the following Tuesday?

0225   0025   1125   1525
Ⓐ   Ⓑ   Ⓒ   Ⓓ

23 Here is a table showing details of tides in Sydney.

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What was the length of the lowest tide in all three days?

0.30m	1.32m	0.37m	1.30m
Ⓐ	Ⓑ	Ⓒ	Ⓓ

24 Jack can run at a rate of 6 KM/Hr. If he runs from his home to the station, he can travel the distance in 30 minutes. What is the distance between Jack's home and the station?

6 Kilometres	8 Kilometres	7 Kilometres	3 Kilometres
Ⓐ	Ⓑ	Ⓒ	Ⓓ

25 Here is a magic square. The sum of any row, column or diagonal is equal. Find the value of x.

23	28	21
22	x	26
27	20	25

22	25	24	26
Ⓐ	Ⓑ	Ⓒ	Ⓓ

26	Here is a pattern of numbers. Find the value of x in this pattern.

2, 5, 9, x, 20, 27, 35

14	12	10	16
Ⓐ	Ⓑ	Ⓒ	Ⓓ

27	What is the HCF of 144 and 220?

8	2	4	6
Ⓐ	Ⓑ	Ⓒ	Ⓓ

28	Three girls shared some marbles equally among each the mselves but two marbles were left in the end. If the same number of marbles was shared equally among four girls then again two marbles are left in the end. Finally, if the same number of marbles was shared among five girls equally then interestingly again two marbles are left in the end. How many marbles do the girls have in total?

60	48	55	62
Ⓐ	Ⓑ	Ⓒ	Ⓓ

29	Calculate the 16th term of the Fibonacci sequence from given sequence of numbers.

1, 1, 2, 3, 5, 8…

986	987	1597	610
Ⓐ	Ⓑ	Ⓒ	Ⓓ

30	The average of five numbers is 11. If a sixth number is added, the average becomes 12. What is the sixth number?

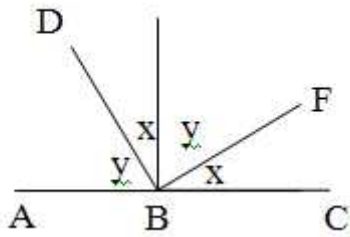| 17	16	14	15
Ⓐ	Ⓑ	Ⓒ	Ⓓ

31 What is the value of angle DBF in the following figure?

85	80	70	90
Ⓐ	Ⓑ	Ⓒ	Ⓓ

32 Find the formula which related x and y in the following table.

z	1	2	3	4
y	2	5	8	11

y = 2x + 1	y = 3x – 1	y = x+1	y = 3x -2
Ⓐ	Ⓑ	Ⓒ	Ⓓ

33 Here is an equation:

$$7x - \frac{3}{2} = 2\,(x\text{-}4)$$

What is the value of x?

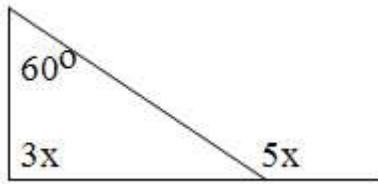| -2	1.3	-1.3	2
Ⓐ	Ⓑ	Ⓒ	Ⓓ

34 Find the value of x in the given triangle.

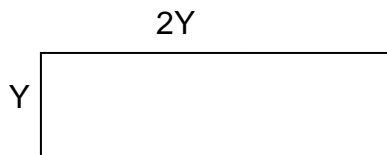20   25   30   35
Ⓐ   Ⓑ   Ⓒ   Ⓓ

35 The perimeter of the following rectangle is 60 metres. What is the area of the rectangle in m^2?

2Y

Y

150   200   300   60
Ⓐ   Ⓑ   Ⓒ   Ⓓ

Answers:

1.	C	16.	D	31.	D
2.	B	17.	C	32.	B
3.	D	18.	A	33.	C
4.	A	19.	C	34.	C
5.	D	20.	D	35.	B
6.	B	21.	C		
7.	D	22.	A		
8.	154 cm^2	23.	C		
9.	A	24.	D		
10.	D	25.	C		
11.	D	26.	A		
12.	C	27.	C		
13.	C	28.	D		
14.	A	29.	B		
15.	A	30.	A		