

Regional Selection Mathematics 2009

1.	Anju is 3 years younger than her husband. Anju is 26 years older than her daughter, who is 3 years younger than her brother. If their combined ages add up to 158, calculate the ages of Anju and her daughter.	(2)
2.	Bimala invested Rs 29,256 in a bank over 2 years at the interest rate of 7 % p.a. Calculate the compound interest to the nearest rupee.	(1)
3.	Simplify the following: $(\sqrt{85} \times \sqrt{51}) \div (\sqrt{27} \times \sqrt{45})$	(1)
4.	a. You want to build a wall. How many measuring 10 cm x 5 cm x 4 cm are required to construct a wall 30 m long, 1.5 m wide and 3 m high, with 2 windows each 0.5 m x 4 m? b. How much would you pay for the total number of bricks if the price of one brick is Rs 5.35? (Answer to the nearest rupee.)	(1)
5.	Simplify the following: $(\cot 60 \times \operatorname{cosec} 120) \times (\cos 30 \times \sin 120)$	(2)
6.	In a store, an item costing Rs 2,458 is reduced by 34% in a sale. This is then further reduced by $\frac{3}{8}$. What is the total reduction on the item in rupees? (Answer to the nearest rupee.)	(1)
7.	The area of a room is 308m^2 . Its length is 8m longer than its breadth. Calculate the length and breadth of the room.	(2)
8.	A large container has 320 litres of a mixture of 2 liquids, A and B. The current concentration is 45% A and the rest is B. An extra amount of liquid B is added that changes the concentration of A to 20 % of the new volume. Calculate how much liquid is added to the container.	(2)
9.	A military camp contains 1,050 soldiers and there are sufficient rations to feed the troops for 31 days before the next re-supply. After 17 days, 350 soldiers moved to another base. How many full days will the rations now last for the remaining soldiers in the camp?	(1)
10.	What was the original marked price of an article bought by a customer paying Rs 19,584 at 36 % discount? (Answer to the nearest rupee.)	(1)

Q NO	ANSWER	HIGHEST POINT SCORE	
1.	a. Anju	51	(1)
	b. Daughter	25	(1)
2	Rupees	4,239	(1)
3		$\frac{17}{9}$	(1)
4	a. Total Bricks	645,000	(1)
	b. Total Cost Rupees	3,450,750	(1)
5		$\frac{1}{2} = 0.5$	(2)
6	Rupees	1,444	(1)
7	Length Metres	22	(1)
	Breadth Metres	14	(1)
8	Litres	400	(2)
9	Days	21	(1)
10	Rupees	30,600	(1)

Regional Selection Mathematic 2009

1.	Krishna is 6 years younger than her husband. Krishna is 27 years older than her daughter, who is 3 years younger than her brother. If their combined ages add up to 187, calculate the ages of Krishna and her daughter.	(2)
2.	Gamar invested Rs 10,630 in a bank over 2 years at the interest rate of 8 % p.a. Calculate the compound interest to the nearest rupee.	(1)
3.	Simplify the following: $(\sqrt{132} \times \sqrt{15}) \div (\sqrt{24} \times \sqrt{55})$	(1)
4.	a. You want to build a wall. How many bricks measuring 18 cm x 5 cm x 4 cm are required to construct a wall 36 m long, 1.5 m wide and 3 m high, with two windows each 4 m x 1.5 m?	(1)
	b. How much would you pay for the total number of bricks if the price of one brick is Rs 5.28? (Answer to the nearest rupee.)	(1)
5.	Simplify the following: $(\sec 45 \times \sin 120) \times (\tan 30 \times \cos 45)$	(2)
6.	In a store, an item costing Rs 7,864 is reduced by 45% in a sale. This is then further reduced by $\frac{1}{3}$. What is the total reduction on the item in rupees? (Answer to the nearest rupee.)	(1)
7.	The area of a field is 336m^2 . Its length is 16m longer than its breadth. Calculate the length and breadth of the field.	(2)
8.	A large container has 1,950 litres of a mixture of 2 liquids, A and B. The current concentration is 15% A and the rest is B. An extra amount of liquid B is added that changes the concentration of A to 10 % of the new volume. Calculate how much liquid is added to the container.	(2)
9.	A military camp contains 1,650 soldiers and there are sufficient rations to feed the troops for 37 days before the next re-supply. After 25 days, 550 soldiers arrived from another base. How many full days will the rations now last?	(1)
10.	What was the original marked price of an article bought by a customer paying Rs 98,224 at 44 % discount? (Answer to the nearest rupee.)	(1)

Q NO	ANSWER	HIGHEST POINT SCORE
1.	a. Krishna 58	(1)
	b. Daughter 31	(1)
2	Rupees 1,769	(1)
3	$\frac{\sqrt{3}}{\sqrt{2}}$ accept $\frac{\sqrt{6}}{2}$	(1)
4	a. Total Bricks 400,000	(1)
	b. Total Cost Rupees 2,112,000	(1)
5	1/2	(2)
6	Rupees 4,981	(1)
7	Length Metres 28	(1)
	Breadth Metres 12	(1)
8	Litres 975	(2)
9	Days 9	(1)
10	Rupees 175,400	(1)

REGIONAL SELECTION

Name: _____

Chest Number: _____

Instructions: *Fill in the missing words. Only write ONE word in each space.
There is a contraction in every passage, e.g. don't*

Birmingham

Birmingham is the largest city in the US state of Alabama. (1)_____ was founded in 1871, as (2) _____ industrial city and named after Birmingham, one (3)_____ the UK's cities. For the next hundred (4) _____ it was the (5)_____ industrial centre of the southern US. People (6) _____ so amazed at the speed of its growth (7)_____ it was called 'The Magic City'. There were (8)_____ of high-rise buildings and busy street-car lines. Some of the skyscrapers were joined (9)_____ so people (10)_____ have to descend to ground level.

(11)_____ major industries centred on iron and steel production. (12)_____ wartime and the post-war period, Birmingham flourished (13)_____ of a huge demand (14)_____ the metals. After (15)_____ war, it became a centre (16)_____ the civil rights struggles in America for African-Americans.

In the second half of (17)_____ twentieth century, the economy diversified, i.e. ceased to depend on steel quite so (18)_____. Now it has industries such as banking, insurance, medicine and publishing. Currently, there (19) _____ around a billion dollars being invested in reconstructing the centre.

Birmingham is in a valley with hot summers, mild winters and a high rainfall. In the winter it gets some snow. In the autumn it sometimes gets tornadoes (20)_____ are occasionally very strong.

Birmingham

1.	It / Birmingham
2.	an
3.	of
4.	years
5.	largest / biggest / main / only
6.	were
7.	that
8.	lots / hundreds / numbers
9.	together/up
10.	didn't
11.	Its /The /Some/Many
12.	In /During
13.	because
14.	for
15.	the
16.	for / of
17.	the
18.	much
19.	are
20.	which / that

REGIONAL SELECTION

Name: _____

Chest Number: _____

Instructions: *Fill in the missing words. Only write ONE word in each space.
There is a contraction in every passage, e.g. don't*

Cork

Cork is the second largest city in the Republic of Ireland. Like most of Ireland, Cork has (1)_____ wet, mild and changeable climate. In winter it never gets very cold and in summer it (2)_____ get very hot, but it rains all the year round. The city is (3)_____ on the River Lee in the south of the country. It has about 120,000 (4)_____.

Cork (5)_____ first established as a settlement for monks in the sixth century. (6)_____ grew to become a city after the year 915 when invaders (7)_____ Denmark established a port there. They traded with people from all over Europe. In the early twentieth (8)_____ Ireland fought a war of independence with Britain and many of the older (9)_____ in Cork were destroyed.

The city is (10)_____ for its churches and its daily market, (11)_____ fish, fruit, vegetables and spices are sold. It is also (12)_____ famous shopping centre. St Patrick's Street is (13)_____ main shopping street, where many of the buildings are hundreds of years (14)_____. Cork used to be an (15)_____ manufacturing centre, but many of the old factories (16)_____ closed. Today, most people in Cork work in industries (17)_____ as pharmaceuticals, IT and services. (18)_____ is a large university in the city and tourists often (19)_____ to Cork to see (20)_____ city's parks and buildings.

Cork

1	a
2	doesn't
3	situated / located / positioned
4	inhabitants / people
5	was
6	It / Cork
7	from
8	century
9	buildings / places / houses
10	famous / known / renowned
11	where
12	a
13	the
14	old
15	important
16	have / are / were
17	such
18	There
19	come / go
20	the