



Mathematics
ITEM BANK

R5 INDIA

Write the correct answer in the space:

1. $48 \times 5 =$

2. $52 - 7 =$

3. $45 \div 15 =$

4. $9.81 + 7.62 =$

5. $18.23 - 0.2 =$

6. $\frac{9}{8} \times \frac{2}{3} =$

7. 25% of 240 =

This redacted item was taken from TIMSS 2003 Released Items: Eighth Grade Mathematics (Unique ID: M022194)

SOURCE: TIMSS 2003 Assessment. Copyright © 2005 International Association for the Evaluation of Educational Achievement (IEA).

Publisher: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

9. One year a company reported selling [1426 tons] of fertilizer. The following year the company sold 15% less fertilizer. Which is the closest approximation to the number of [tons] of fertilizer sold in the second year?

a. 200

b. 1200

c. 300

d. 1600

This redacted item was taken from TIMSS 2003 Released Items: Eighth Grade Mathematics (Unique ID: M032671)

SOURCE: TIMSS 2003 Assessment. Copyright © 2005 International Association for the Evaluation of Educational Achievement (IEA).

Publisher: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

11. [Madhavi] has 6 red boxes. Each box has 4 pencils inside. She also has 3 blue boxes. Each blue box has 2 pencils inside. How many pencils does [Madhavi] have altogether?

- a. 36
- b. 15
- c. 24
- d. 30

This redacted item was taken from TIMSS 2003 Released Items: Eighth Grade Mathematics (Unique ID: M012014)

SOURCE: TIMSS 2003 Assessment. Copyright © 2005 International Association for the Evaluation of Educational Achievement (IEA).

Publisher: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

This redacted item was taken from TIMSS 2003 Released Items: Eighth Grade Mathematics (Unique ID: M022156)

SOURCE: TIMSS 2003 Assessment. Copyright © 2005 International Association for the Evaluation of Educational Achievement (IEA).

Publisher: TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College.

14. In a school there were 1200 students (boys and girls). A sample of 100 students was selected at random, and 45 boys were found in the sample. Which of these is most likely to be the number of boys in the school?



- a. 450
- b. 500
- c. 540
- d. 600

15. Tickets for a train cost either 10 [dollars], 15 [dollars], or 30 [dollars]. Of the 900 tickets sold, $\frac{1}{5}$ cost 30 [dollars] each and $\frac{2}{3}$ cost 15 [dollars] each. What fraction of the train tickets was sold for 10 [dollars] each?

- a. $\frac{2}{15}$
- b. $\frac{1}{15}$
- c. $\frac{12}{15}$
- d. $\frac{6}{15}$

Below is a receipt that [Oscar] received after making a purchase in a cloth shop. There are some blank spaces in the receipt where information is missing. Read carefully.

[Kathy's] Shop			RECEIPT N° 0568	
[Date: [October 4th, 2012]	
No. of items	DESCRIPTION	UNIT PRICE	LINE TOTAL	DISCOUNT
10	Trousers	[\$12]	[\$ 120]	[\$ 24]
25	T-shirts	[\$ 13]	[\$ 325]	No discount
78	Socks	[\$ 4]	[\$ 312]	[\$ 35]
37	Dresses	[\$ 20]	[\$740]	No discount
49	Skirts	[\$ 8]	[\$392]	[\$ 33]
			SUBTOTAL	[\$ 92]
			TOTAL	

16. Based on the receipt, answer the following questions by marking the correct answer with an X.

How many items did [Oscar] buy?

a. 199 ☐

b. 209 ☐

c. 198 ☐

d. 208 ☐

17. [Anitha] wants to buy 38 T-shirts. How much will she pay?

a. [\$ 325] ☐

b. [\$ 494] ☐

c. [\$ 484] ☐

d. [\$ 304] ☐

Below is a medicine description. Read it carefully.

Each box **costs**

[\$15]

[CIPIRINA]

INGREDIENTS: Each tablet contains 500 mg *acetaminophen* acid

DOSAGE: ORAL. 1 or 2 tablets every 4 hours, preferably accompanied by food, for not longer than 28 days. In the case of children, only 1 tablet every 8 hours for not longer than 10 days.

INDICATIONS: [Cipirina] is often used to relieve different symptoms. This medication relieves mild to moderate pain in the muscles of the hands and legs. It reduces fever, bone pain and menstrual symptoms.

CAUTION: [Cipirina] may cause drowsiness, gastric pain, allergies or ulcers. Children up to 10 years with chicken pox and asthma should consult with their doctor before taking this medicine.

Based on the text, answer the following questions by marking the correct answer with an X.

18. According to the description, how many tablets can a child take in one day?

- a. 2 tablets ☐
- b. 1 tablet ☐
- c. 3 tablets ☐
- d. 8 tablets ☐

19. If [Arturo] takes the largest amount of pills recommended for adults, how many more pills can he take compared with a child in two days?

- a. [Arturo] can take 18 pills more than a child ☐
- b. [Arturo] can take 3 pills more than a child ☐
- c. [Arturo] can take 9 pills more than a child ☐
- d. [Arturo] can take 7 pills more than a child ☐

20. [Ana's] doctor tells her to take 2 tablets every 12 hours for a week. How many mg of acetaminophen will [Ana] have taken in total by the end of the week?

- a. 14 000 mg ☐
- b. 7 000 mg ☐
- c. 21 000 mg ☐
- d. 12 000 mg ☐

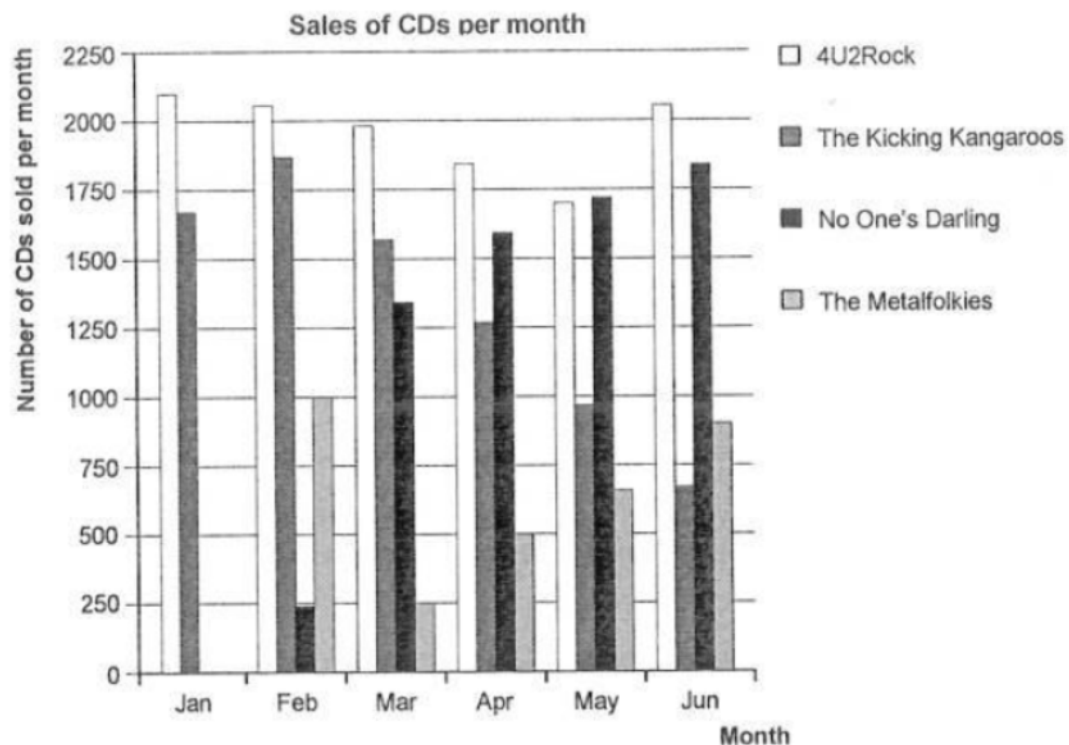
21. [Manoj] wants to buy 7 boxes. When he was going to pay the cashier told him that there was a 25% discount on the tablets he was buying. Which mathematical

operation(s) is (are) needed to get the amount of money he paid for his medicine?

- a. Only multiplication ☐
- b. Multiplication, division and subtraction ☐
- c. Division and multiplication ☐
- d. Addition and subtraction ☐

CHARTS

In January, the new CDs of the bands *4U2Rock* and *The Kicking Kangaroos* were released. In February, the CDs of the bands *No One's Darling* and *The Metalfolkies* followed. The following graph shows the sales of the bands' CDs from January to June.



22. How many CDs did the band The Metalfolkies sell in April?
- A. 250
 - B. 500
 - C. 1000
 - D. 1270
23. In Which month did the band NO One's Darling sell more CDs than the ban The Kicking Kangaroos for the first time?

- A. No month
- B. March
- C. April
- D. May

24. The manager of The Kicking Kangaroos is worried because the number of their CDs that sold decreased from February to June.

What is the estimate of their sales volume for July if the same negative trend continues

- A. 70 CDs
- B. 370 CDs
- C. 670 CDs
- D. 1340 CDs

HELEN THE CYCLIST



Helen has just got a new bike. It has a speedometer which sits on the handlebar.

The speedometer can tell Helen the distance she travels and her average speed for a trip.

25. On one trip, Helen rode 4km in the first 10 minutes and then 2 km in the next 5 minutes. Which one of the following statements is correct?

- A. Helen's average speed was greater in the first 10 minutes than in the next 5 minutes.
- B. Helen's average speed was the same in the first 10 minutes and in the next 5 minutes.
- C. Helen's average speed was less in the first 10 minutes than in the next 5 minutes.

D. It is not possible to tell anything about Helen's average speed from the information given.

26. Helen rode 6 km to her aunt's house. Her speedometer showed that she had averaged 18 km/h for the whole trip. Which one of the following statements is correct?

- A. It took Helen 20 minutes to get her aunt's house.
- B. It took Helen 30 minutes to get her aunt's house.
- C. It took Helen 3 hours to get her aunt's house.
- D. It is not possible to tell how long it took Helen to get to her aunt's house.

27. Helen rode her bike from home to the river, which is 4 km away. It took her 9 minutes. She rode home using a shorter route of 3km. this only took her 6 minutes. What is Helens average, speed, in km/h, for the trip to the river and back?

Average speed for the trip:.....km/h

WHICH CAR?

Chris has just received her car driving licence and wants to buy her first car.

This table below shows the details of four cars she finds at a local car dealer.



Model:	Alpha	Bolte	Castel	Dezal
Year	2003	2000	2001	1999
Advertised price (zeds)	4800	4450	4250	3990
Distance travelled (kilometres)	105 000	115 000	128 000	109 000
Engine capacity (litres)	1.79	1.796	1.82	1.783

Chris wants a car that meets all these conditions:

- The distance travelled is not higher than 120 000 kilometers.
- It was made in the year 2000 or a later year.
- The advertised price is not higher than 4500 zeds.

28. Which car meets Chris conditions?

- A. Alpha
- B. Bolte
- C. Castel
- D. Dezal

29. Which car's engine is the smallest?

- A. Alpha
- B. Bolte
- C. Castel
- D. Dezal

30. Chris will have to pay an extra 2.5% of the advertised cost of the car as taxes.

How much are the extra taxes for the Alpha?

Extra taxes in zeds:

CLIMBING MOUNT FUJI

Mount Fuji is a famous dormant volcano in Japan.



31. Mount fuji is only open to the public for climbing from 1 July to 27 August each year. About 200 000 people climb Mount fuji during this time. On average, about how many people climb Mount fuji each day?

- A. 340
- B. 710
- C. 3400
- D. 7100
- E. 7400