

# Homework 1 • Mathematical Reasoning

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Answer the following multiple-choice questions by selecting the correct option.

1. Emma bought 15 t-shirts for \$12 each at a clothing store. If she saved \$4 on each t-shirt, how much would she have paid to buy all the t-shirts at the original price?
  - A. \$180
  - B. \$200
  - C. \$240
  - D. \$260
2. A gardener planted 420 flowers in his garden. He planted 180 roses and 120 tulips. The rest were daisies. Later, he planted 50 more daisies. How many daisies are in the garden now?
  - A. 100
  - B. 120
  - C. 150
  - D. 170
3. Gem and Suzy are collecting stamps. Gem has 250 stamps, while Suzy has 175 stamps. How many more stamps does Gem have than Suzy?
  - A. 75
  - B. 85
  - C. 100
  - D. 125
4. A library has 200 books. The children's section has 60 fewer books than the adult section. How many books are in the adult section?
  - A. 130
  - B. 260
  - C. 200
  - D. 320



5. Mark bought a new laptop and was allowed to pay for it in instalments. After paying a deposit of \$250, he could pay the rest in 18 monthly instalments. If Mark paid \$150 every month, how much was the laptop?
- A. \$1850
  - B. \$2250
  - C. \$2700
  - D. \$2950
6. Daniel spent \$8 and saved \$14 of his wages each day. How much did he earn in 5 days?
- A. \$30
  - B. \$70
  - C. \$40
  - D. \$110
7. A shopkeeper sold 150 books on Monday. He sold 20 more books on Tuesday than on Monday. The number of books sold on Wednesday was three times the number sold on Tuesday. How many books were sold altogether during the 3 days?
- A. 840
  - B. 830
  - C. 790
  - D. 660
8. A vendor places watermelons in boxes of 10 and lemons in boxes of 5. After selling each box of watermelons for \$20 and each box of lemons for \$10, the vendor earns \$3000. If the vendor sells 2 times as many boxes of lemons as boxes of watermelons, how many pieces of fruit does the vendor sell in all?
- A. 1200
  - B. 1500
  - C. 1800
  - D. 2000

9. Ms Smith imported some boxes of chocolates. There were 36 bars of chocolate in each box. She then sold 12 bars of chocolate for \$6. If she received \$432 from the sale of chocolates, how many boxes of chocolates did she sell?
- A. 24
  - B. 36
  - C. 48
  - D. 60
10. A farmer harvested 50 apples from one tree, 70 from another, and 60 from a third tree. If he sells each apple for \$3, how much money does the farmer make from the apples?
- A. \$450
  - B. \$540
  - C. \$510
  - D. \$600
11. After Sarah gave 150 beads to Hannah, they had the same number of beads. If they had 500 beads altogether, how many beads did Sarah have at first?
- A. 350
  - B. 400
  - C. 450
  - D. 500
12. A store sold 200 T-shirts on Monday. On Tuesday, the store sold 50 more T-shirts than on Monday. On Wednesday, the number of t-shirts sold was half the number sold on Tuesday. On Thursday, the store sold 30 more t-shirts than on Wednesday. On Friday, the number of T-shirts sold was the same as on Tuesday. How many t-shirts were sold altogether during the 5 days?
- A. 980
  - B. 1,000
  - C. 970
  - D. 1,050

13. Sophia bought a gym membership and was allowed to pay for it in instalments. After paying an initial fee of \$150, she could pay the rest in 12 monthly instalments. If Sophia paid \$40 every month, how much was the total cost of the gym membership?
- A. \$480
  - B. \$630
  - C. \$450
  - D. \$680
14. In a concert hall, there are a total of 500 tickets sold for two shows: rock and jazz. There are 50 more jazz tickets than rock tickets. The concert organiser arranged an equal number of rock tickets in 25 sections and sold 5 sections of rock tickets. How many more jazz tickets than rock tickets are left?
- A. 80
  - B. 90
  - C. 95
  - D. 100
15. Lily had 40 more candies than Mark at first. Mark gave 10 of his candies to Lily. Lily now has three times as many candies as Mark. How many candies did Mark have at first?
- A. 15
  - B. 20
  - C. 35
  - D. 40
16. Alex had 4 times as many coins as Bob. After giving Bob 200 coins, Alex had three times as many coins as Bob. How many coins did Alex have in the beginning?
- A. 200
  - B. 1600
  - C. 2800
  - D. 3200

17. James, Emily, and Jack swam laps for triathlon training. Together, they swam 99 laps. James swam three times as many laps as Emily, and Jack swam 9 more laps than Emily. How many more laps did James swim compared to Jack?
- A. 36
  - B. 27
  - C. 18
  - D. 9
18. The company has 450 employees. This is 150 more than three times the number of employees in another company. How many employees does the other company have?
- A. 75
  - B. 100
  - C. 120
  - D. 150
19. Lily had 5 times as many pencils as Rachel. After giving Rachel 300 pencils, Lily had three times as many pencils as Rachel. How many pencils did Rachel have in the end?
- A. 300
  - B. 600
  - C. 900
  - D. 1200
20. Jake spent \$10 on each of the 8 pens he bought. He also bought 5 notebooks for \$15 each. How much did Jake spend in total?
- A. \$130
  - B. \$155
  - C. \$170
  - D. \$195

21. A basket contains 5 times as many apples as oranges. If there are 60 more apples than oranges, how many pieces of fruit are in the basket?
- A. 15
  - B. 60
  - C. 90
  - D. 120
22. A vendor places grapes in bags of 12 and cherries in bags of 6. After selling each bag of grapes for \$4 and each bag of cherries for \$8, the vendor earns \$2688. If the vendor sells 3 times as many bags of cherries as bags of grapes, how many pieces of fruit does the vendor sell in all?
- A. 1920
  - B. 2064
  - C. 2592
  - D. 2880
23. At a school event, there are 15 teachers and 14 parents accompanying a group of students. The number of boys is 9 more than the number of girls. In total, there are 396 people at the event. How many girls are at the event?
- A. 165
  - B. 172
  - C. 179
  - D. 183
24. A gardener harvested 960 tomatoes and packed them equally into 8 baskets. After giving 3 baskets to a community centre, she decided to repack 6 tomatoes into each of the remaining baskets. How many baskets of tomatoes did she have in the end?
- A. 100
  - B. 150
  - C. 200
  - D. 250

25. A sports store purchased 10 sets of basketballs. Each set contained 5 basketballs. They also bought 15 bundles of whistles. Each bundle contained 20 whistles. If the store paid \$25 for each basketball and \$1 for each whistle, how much did they pay in total?
- A. \$1200
  - B. \$1500
  - C. \$1550
  - D. \$1600
26. When 36 apples are placed in a basket, the total weight is 7,200 g. When 24 apples are placed in the same basket, the total weight is 5,400 g. Find the weight of the basket.
- A. 3600 g
  - B. 1800 g
  - C. 1080 g
  - D. 1500 g
27. Mr Thompson bought 4 kg of chicken at \$15 per kg, 6 kg of beef at \$20 per kg, and some pork at \$10 per kg. If Mr. Thompson paid \$350 for the meat, how many kilograms of pork did he buy?
- A. 17
  - B. 18
  - C. 19
  - D. 20
28. The number of chairs in a room is 6 times the number of tables. If there are 30 more chairs than tables, how many chairs and tables are there altogether in the room?
- A. 30
  - B. 42
  - C. 50
  - D. 62



29. A shopkeeper had 72 cartons of milk in the morning. During the day, he sold 45 cartons. Later, he received another delivery of 28 cartons. How many cartons of milk does the shopkeeper have now?
- A. 27
  - B. 45
  - C. 55
  - D. 72
30. A bookstore has a total of 300 novels and comics. There are 40 more comics than novels. The store manager arranged an equal number of novels on 10 shelves and moved 5 shelves of novels to another store. How many more comics than novels are left?
- A. 100
  - B. 105
  - C. 110
  - D. 115





**Activity 3:** Complete the following writing task.

**Should students have a longer school day to improve learning?**

Write an argument, counterargument, and refutation based on the topic.

Argument:

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Counterargument:

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Refutation:

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**Activity 4:** Complete the following writing task.

**Should students be allowed to use AI tools for homework and research?**

Write an argument, counterargument, and refutation based on the topic.

Argument:

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Counterargument:

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Refutation:

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**Activity 5:** Write a persuasive sentence for each appeal based on the following scenarios.

1. Persuade someone to switch to reusable bags instead of plastic.

Ethos: \_\_\_\_\_

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Pathos: \_\_\_\_\_

\_\_\_\_\_

Logos: \_\_\_\_\_

\_\_\_\_\_

2. Convince someone to spend less time on their phone and more time outdoors.

Ethos: \_\_\_\_\_

\_\_\_\_\_

Pathos: \_\_\_\_\_

\_\_\_\_\_

Logos: \_\_\_\_\_

\_\_\_\_\_

3. Encourage your classmates to read more books.

Ethos: \_\_\_\_\_

\_\_\_\_\_

Pathos: \_\_\_\_\_

\_\_\_\_\_

Logos: \_\_\_\_\_

\_\_\_\_\_

