

High School Mathematics Test 2013

Year
7

Integers

Non Calculator
Test

Skills and Knowledge Assessed:

- Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124)
- Compare, order, add and subtract integers (ACMNA280)
- Carry out the four operations with (rational numbers and) integers, using efficient mental and written strategies and appropriate digital technologies (ACMNA183)

Name _____

Answer all questions in the spaces provided on this test paper by:

Writing the answer in the box provided.

or

Shading in the bubble for the correct answer from the four choices provided.

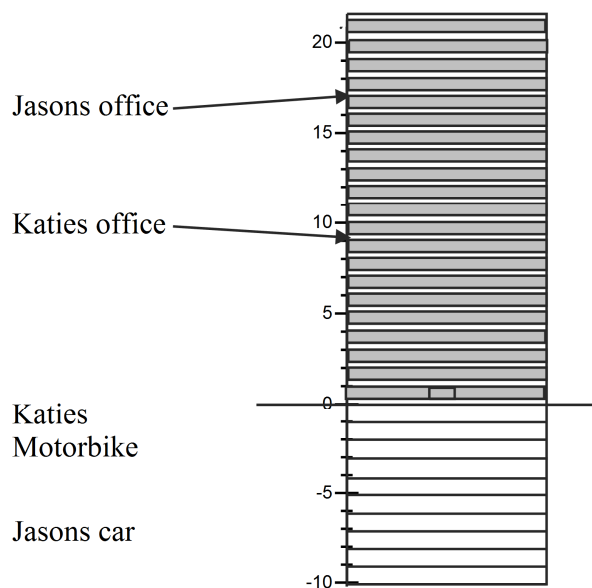
Show any working out on the test paper.

Questions 1 – 4 refer to the diagram below. An office building has 21 floors above ground level (which are numbered from 0 to 20).

The building also has 10 floors of parking below ground level which are numbered from -1 to -10 .

Jason has an office on floor number 17 and parks his car on floor number -8 .

Katie has an office on floor number 9 and parks her motorbike on floor number -3 .



- The levels of Jason's and Katie's offices are shown on the diagram with arrows. Use arrows to show the levels on which their vehicles are parked.

- Which of these integers would best describe how many floors that Jason travels in the elevator when he goes from his office to his car?

-25
☐

-9
☐

$+9$
☐

$+25$
☐

- What integer would describe how many floors Katie must she travel in the elevator to get from her motorbike to her office?

- What integer describes how many floors Jason would travel to get from his car to Katie's motorbike?

Questions 5 – 8 refer to the statement below provided by Sally’s bank for February.

Date	Transaction	Balance
1 / 2 / 2013	Opening Balance	\$60
4 / 2 / 2013	Deposit of \$40	\$100
10 / 2 / 2013	Withdrawal of \$80	\$20
15 / 2 / 2013	Withdrawal of \$70	– \$50
20 / 2 / 2013	Withdrawal of \$80	
24 / 2 / 2013	Deposit of \$100	
26 / 2 / 2013	Withdrawal of \$30	
28 / 2 / 2013		– \$120

5. What is the balance on 20 / 2 / 2013?

6. What is the balance on 26 / 2 / 2013?

7. On the 28 / 2 / 2013 Sally makes a transaction that brings the balance to – \$120. What was the transaction?

☐ Deposit of \$60

☐ Deposit of \$180

☐ Withdrawal of \$60

☐ Withdrawal of \$180

8. Later in the year her account showed the following.

1 / 4 / 2013	Opening balance	
2 / 4 / 2013	Deposit of \$140	– \$40

What was the opening balance?

\$

9. $8 - 17 =$

10. $-7 + 2 =$

☐ -9

☐ -5

☐ 5

☐ 9

11. $-12 + (-7) =$

12. $9 + (-7) =$

13. $5 + (-11) =$

 -16 -6 6 16

14. $15 - (-7) =$

 -22 -8 8 22

15. $-19 - (-8) =$

16. $-18 - 35 =$

17. $-8 + 5 - (-9) =$

 -12 -6 -4 6

18. $24 - 18 + (-7) - (-1) =$

-
19. Some parts of the Earth's surface are below sea level. The Dead Sea is -395 metres relative to sea level, and Death Valley is -85 metres relative to sea level. How many metres higher or lower is the Dead Sea?

The Dead Sea is

metres

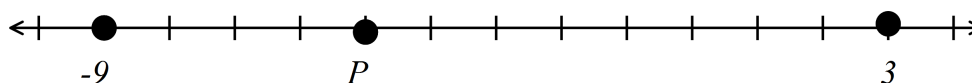
higher

Cross out one.

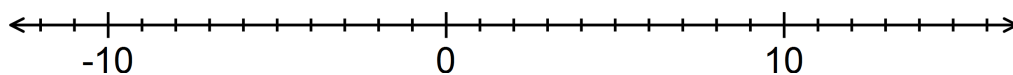
lower

-
20. In a game Mitchell gets 40 points, then gets another 120 points, before losing 60 points and then losing another 180 points before the game ends. How many points does he have at the end?

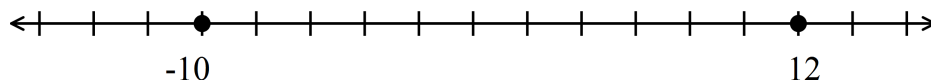
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21. The numbers -9 and 3 are marked on the number line below. What is the third number (labelled P) which is marked on the number line?



22. Mark the numbers -7 and 11 on the number line below.



23. What number is halfway between -10 and 12 on the number line?



-1
☐

0
☐

1
☐

2
☐

24. Re-write the numbers -35 , -9 , -23 , -34 and -15 in descending order.

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25. Which statement is correct?

☐ $6 < -8$

☐ $-6 > 8$

☐ $-6 < -8$

☐ $-6 > -8$

26. Write the next two numbers in the number pattern.

-34 , -28 , -22 , ,

27. $-5 \times -9 =$

-45
☐

-4
☐

36
☐

45
☐

28. $6 \times -8 =$

29. $-7 \times 4 =$

30. $-14 \times -6 =$

-84
☐

-20
☐

84
☐

146
☐

31. $(-4)^3 =$

-256
☐

-64
☐

-12
☐

12
☐

32. $-48 \div (-6) =$

33. $63 \div (-7) =$

34. $-96 \div 12 =$

35. $\frac{-72}{-6} =$

-256
☐

-64
☐

-12
☐

12
☐

36. $-7 \times -5 \times -2 =$

37. $9 \times (7 - 12) =$

-51
☐

-45
☐

-4
☐

51
☐

38. $(-3)^4 \times (-2) =$

-162
☐

-81
☐

24
☐

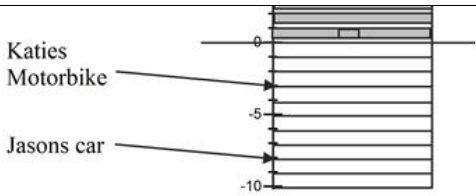
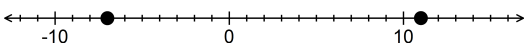
162
☐

39. $7 \times (-4) + (-32) \div (-2) =$

-
40. Dave started with \$450 in his bank account. He made eight withdrawals of \$70 each. What was the balance of the account after these withdrawals, (assuming that it can go below zero)?

Integers

ANSWERS

Non Calculator Short Answer Section	
1.	
2.	-25
3.	+12
4.	+5
5.	-\$130
6.	-\$60
7.	Withdrawal of \$60
8.	-\$180
9.	-9
10.	-5
11.	-19
12.	2
13.	-6
14.	22
15.	-11
16.	-53
17.	6
18.	0
19.	310 metres lower
20.	-80 points
21.	-5
22.	
23.	1
24.	-9, -15, -23, -34, -35
25.	$-6 > -8$
26.	-16, -10
27.	45
28.	-48
29.	-28

30.	84
31.	-64
32.	8
33.	-9
34.	-8
35.	12
36.	-70
37.	-45
38.	-162
39.	-12
40.	-\$110