

High School Mathematics Test 2013

Year
7

Decimals

Non Calculator
Section

Skills and Knowledge Assessed:

- Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128)
- Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129)
- Multiply and divide decimals by powers of 10 (ACMNA130)
- Round decimals to a specified number of decimal places (ACMNA156)
- Multiply decimals by other decimals. (Extension)

Name _____

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

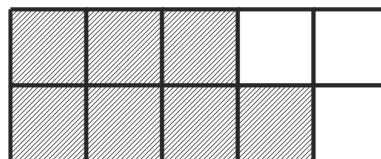
Writing the answer in the box provided.

or

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

Show any working out on the test paper.

1. What decimal represents the part of the rectangle which has been shaded?



2. In a group of 50 students, there are 17 who play football. Which decimal indicates what part of the group plays football?

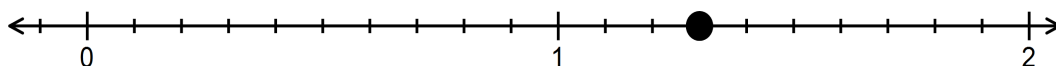
☐ 0.17

☐ 0.34

☐ 0.87

☐ 1.7

3. What is the decimal which is marked on the number line below?



4. $0.03 + 1.5 = ?$

☐ 1.503

☐ 1.53

☐ 1.8

☐ 4.5

5. Add the decimals 3.4, 2.75 and 1.025.

-
6. What is the sum of 4.55, 0.12, 0.007 and 3.7?

-
7. $5.93 - 1.51 = ?$

-
8. $27.4 - 2.59 = ?$

☐ 1.5☐ 2.5☐ 24.81☐ 25.55

-
9. Subtract 3.29 from 12.7.

-
10. What is the difference of 312.12 and 4.559?

-
11. $5.24 \times 8 = ?$

☐ 0.4192☐ 4.192☐ 41.92☐ 4.192

-
12. $0.0729 \times 1\,000 = ?$

☐ 0.729☐ 7.29☐ 72.9☐ 729

-
13. $27.94 \times 6 = ?$

-
14. $0.003\,59 \times 10\,000 = ?$

-
15. Kayla buys 8 memory sticks which each have a capacity of 4.75 Mb.
What is the total capacity of the 8 sticks?

-
16. $40.18 \div 7 = ?$

☐ 5.74☐ 33.18☐ 57.4☐ 281.26

-
17. $23.56 \div 100 = ?$

☐ 0.023 56☐ 0.235 6☐ 2.356☐ 2 356

18. $47.94 \div 6 = ?$

19. $85.6 \div 1\,000 = ?$

-
20. Marjorie poured 1.96 litres of juice into 7 equal sized glasses. How much of a litre does each glass hold? (Give your answer as a decimal.)

-
21. What is the value of the 8 digit in the number 34.689?

Units

☐

Tenths

☐

Hundredths

☐

Thousandths

☐

-
22. The number 0.49 could be expressed in expanded notation as:

☐ $4 \times 1 + 9 \times \frac{1}{10}$

☐ $4 \times \frac{1}{10} + 9 \times \frac{1}{100}$

☐ $4 \times \frac{1}{100} + 9 \times \frac{1}{1000}$

☐ $4 \times \frac{1}{10} + 9 \times \frac{1}{1000}$

-
23. Round 37.8492 correct to the nearest tenth.

-
24. Kandi makes seven table cloths which each use 0.875 square metres of fabric. If no fabric is wasted in making the table cloths, how much fabric is used, correct to the nearest tenth of a metre?

25. $4.37 \times 0.03 = ?$

0.01311

☐

0.1311

☐

1.311

☐

13.11

☐

26. $1.24 \times 0.8 = ?$

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7

Decimals

Calculator Allowed
Short Answer
Section

Name _____

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

Writing the answer in the box provided.

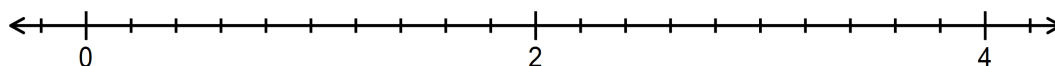
or

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

Show any working out on the test paper.

Calculators are allowed for this section.

1. Mark the position of 1.6 on the number line below.

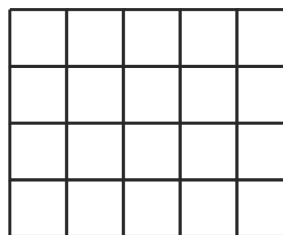


2. Arrange the numbers below in ascending order.

0.51, 0.05, 1.5, 0.15, 0.051, 5.1

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3. Shade a section which is 0.4 of the area of this rectangle.



4. Which is **not** true?

☐ $0.75 > 0.7$

☐ $0.7 < 0.85$

☐ $0.35 < 0.6$

☐ $0.125 > 0.25$

5. Mike measured the mass of four of his textbooks. The results were 1.25 kg, 1.44 kg, 0.9kg, and 0.75 kg. What is the total mass of the four textbooks?

--

-
6. Jacquie measured the mass of her full bag to be 56.5 kg, and the mass of her empty bag to be 2.85 kg. What was the mass of the contents of her bag?

-
7. A number is multiplied by a decimal between 0 and 1. Which is true?

- ☐ The answer will always be smaller than the original number.
- ☐ The answer will always be the same as the original number.
- ☐ The answer will always be bigger than the original number.
- ☐ The answer may be smaller or larger than the original number.

-
8. What is 53.4782, when rounded correct to two decimal places?

53
☐

53.5
☐

53.47
☐

53.48
☐

-
9. Sean bought a piece of timber which was 7.2 metres long. The timber weighs 0.8 kg per lineal metre. (i.e each metre length of the timber weighs 0.8 kg.) What does the whole piece of timber weigh?

-
10. Last month, fuel for model aeroplanes was priced at 248.9 cents per litre. Leo bought 0.6 litres of fuel for his model aeroplane. What is the cost of the fuel, rounded to the nearest cent?

High School Mathematics Test 2013

Decimals

Calculator Allowed
Longer Answer
Section

Name _____

Write all working and answers in the spaces provided on this test paper.

Marks

1. Andrew is a horticulturalist who is working to develop a new strain of barley. He regularly measures the growth of a test planting of three barley plants, which are labelled plants A, B and C.
- (a) He finds that plant A grows 0.65 centimetres per day for the first ten days it is planted. 1
How many centimetres did it grow in these ten days?
.....
.....
- (b) He finds that plant B grows 0.84 centimetres per day for the first six days it is planted. 1
How many centimetres did it grow in these six days?
.....
.....
- (c) Plant C grew unevenly. The amount that it grew each day (in centimetres) for the first five days is given below. How far did it grow in the five days? 1
0.45 cm, 0.6 cm, 0.845 cm, 1.2 cm and 0.74 cm.
.....
.....
- (d) The average growth rate per day is found by dividing the total growth by the number of days. What was the growth rate per day for plant C? 1
.....
.....

High School Mathematics Test 2013 Decimals

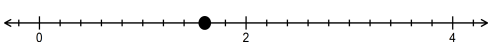
ANSWERS

Non Calculator Section

1.	0.7
2.	0.34
3.	1.3
4.	1.53
5.	7.175
6.	8.377
7.	4.42
8.	24.81
9.	9.41
10.	307.561
11.	41.92
12.	72.9
13.	167.64
14.	35.9

15.	38 Mb
16.	5.74
17.	0.235 6
18.	7.99
19.	0.0856
20.	0.28 litres
21.	Hundredths
22.	$4 \times \frac{1}{10} + 9 \times \frac{1}{100}$
23.	37.8
24.	6.1 metres (nearest tenth)
25.	0.1311
26.	0.992

Calculator Allowed Section

1.	
2.	0.05, 0.051, 0.15, 0.51, 1.5, 5.1
3.	Any 8 squares shaded.
4.	$0.125 > 0.25$
5.	4.34 kg.
6.	53.65 kg.
7.	The answer will always be smaller than the original number
8.	53.48
9.	5.76 kg
10.	149 cents or \$1.49 (nearest cent)

Calculator Allowed Longer Answer Section		
1.	(a) $0.65 \times 10 = 6.5 \text{ cm}$	1
	(b) $0.84 \times 6 = 5.04 \text{ cm}$	1
	(c) $0.45 + 0.6 + 0.845 + 1.2 + 0.74 = 3.835 \text{ cm}$	1
	(d) $3.835 \div 5 = 0.767 \text{ cm}$ $= 0.77 \text{ (to 2 decimal places)}$	1