

School Name

Mathematics Test 2017

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:

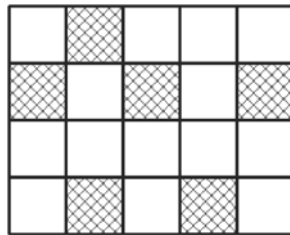
Writing the answer in the box provided.

or

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

Show any working out on the test paper. Calculators are **not** allowed.

1. What part of this rectangle is shaded?



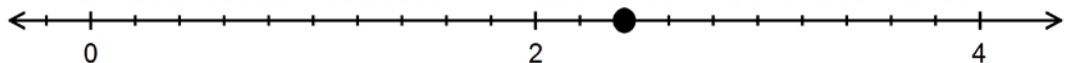
☐ 0.3

☐ 0.4

☐ 0.5

☐ 0.6

2. What number is marked on the number line below?



☐ 2.1

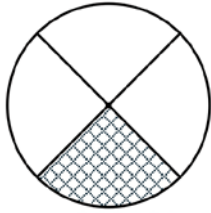
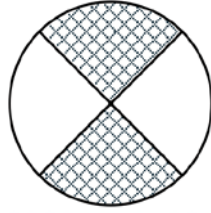
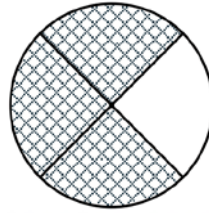
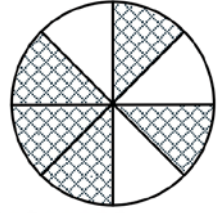
☐ 2.2

☐ 2.4

☐ 2.5

3.

Which circle has 0.5 shaded?

☐☐☐☐

4.

Which decimal is the same as $\frac{145}{1000}$?☐

0.001 45

☐

0.014 5

☐

0.145

☐

1.45

5.

Which fraction is equivalent to 0.24?

☐ $\frac{3}{10}$ ☐ $\frac{1}{24}$ ☐ $\frac{3}{25}$ ☐ $\frac{6}{25}$

6.

 $0.47 + 4.7 = ?$ ☐

0.517

☐

0.94

☐

4.17

☐

5.17

7.

 $0.24 \times 8 = ?$ ☐

0.162

☐

1.92

☐

1.62

☐

19.2

8.

 $4.78 - 3.65 = ?$ ☐

1.13

☐

1.23

☐

1.33

☐

2.03

9.

Three dogs have masses of 4.5 kg, 8.45 kg and 12.3 kg respectively.

What is the total mass of the 3 dogs?



10. $6.5 - 1.8 = ?$

11. $5.3 \times 6 = ?$

12. Round 124.8624 correct to the nearest tenth.

13. What is the value of the 3 digit in the number 0.000 39?

☐ Hundredths☐ Tenths☐ Ten Thousandths☐ Thousandths

14. $0.0125 \times 1000 = ?$

☐ 1.25☐ 12.5☐ 125☐ 1250

15. What is the product of 18.6 and 0.5?

16. $5.4 - 2.87 = ?$

17. Three laptops have hard drives with capacities of 0.512 TB, 1.24 TB and 0.384 TB respectively.

What is the difference in capacity between the largest and smallest hard drives?



18. $4.75 + 10.6 + 8 + 1.2 = ?$

19. $8.64 \div 6 = ?$

20. Leo has a set of 30 new pencils.
Each pencil weighs 1.36 grams.
What is the total weight of the set of pencils?



21. Take 1.35 away from 8.

22. Martin weighs the 12 bottles of water and finds the total mass is 4.5 kg.
What is the mass (in kg) of each bottle of water?



23. $22.95 \div 100 = ?$

24. Round 18.1258 correct to 3 decimal places.

25. Harry cuts 2.28 metres from a roll of cloth which was originally 20 metres long.
How many metres of cloth remain on the roll?



26. Write the decimal number which is represented by the expanded notation:
 $5 \times 10 + 6 \times 1 + 7 \times \frac{1}{100}$.

27. What is the average of 12.5, 6.4, 9.24, 5.06, and 4.5?

28. $12.48 \times 0.9 = ?$

29. $2.415 \div 50$

30. $0.9^3 = ?$

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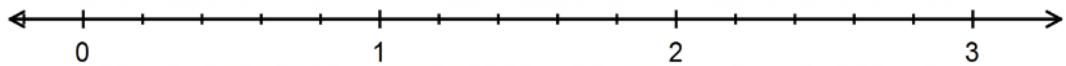
Writing the answer in the box provided.

or

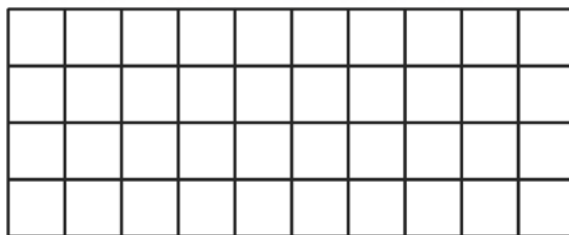
Shading in the bubble for the correct answer from the four choices provided.

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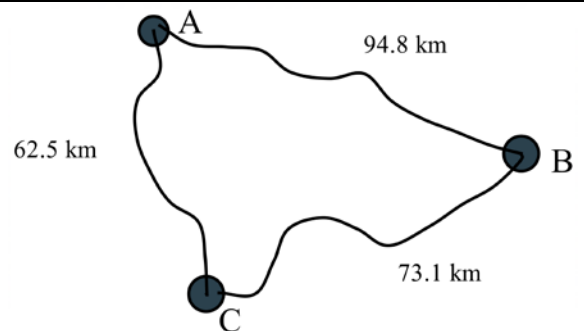
1. Mark the position of 1.8 on the number line below.



2. Shade a section which is 0.75 of the area of this rectangle.



3. Rick is travelling from town A to town B.
How much further would he travel if he went through town C on the way, rather than going directly from A to B?



4.

The mass of a digital radio is 0.84 kg without its batteries.
(It takes four batteries which each have a mass of 0.0095 kg.)
What is the total mass of the radio and the batteries?

5.

What is the value of 12.8×0.059 , when rounded correct to two decimal places?

☐ 0.75☐ 0.755☐ 0.76☐ 0.765

6.

Which is **not** true?

☐ $0.8 > 0.5$ ☐ $0.95 < 1.2$ ☐ $0.8 > 0.75$ ☐ $0.5 < 0.45$

7.

Ashleigh buys 0.24 kg of lollies and divides them into equal piles which each weigh 0.012 kg.

How many piles did she have?

☐ 2 piles☐ 20 piles☐ 30 piles☐ 200 piles

8.

Four friends buy presents for a birthday party.

The mass of each of the four presents is:

0.256 kg, 1.4 kg, 0.824 kg and 1.05 kg.

What is the average mass of the presents?



9. Arrange the numbers below in ascending order.

4.25, 4.5, 0.45, 0.54, 0.425, 4.2

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10. There are two numbers x and y such that $0 < x < 0.5$ and $1 < y < 2$.

Let z be equal to the product of x and y .

Which statement is true?

- ☐ $0 < z < 1$
- ☐ $0.25 < z < 1$
- ☐ $0.5 < z < 2$
- ☐ $0.5 < z < 10$

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ANSWERS

Question	Working and Answer
1.	<p>There are $4 \times 5 = 20$ squares and of these 6 are shaded.</p> <p>Part shaded = $\frac{6}{20} = \frac{3}{10} = 0.3$</p> <p>1st Answer</p>
2.	<p>10 places between 2 and 4, so each is 0.2</p> <p>Dot is 2 places along, so $2 \times 0.2 = 0.4$</p> <p>Number is $2 + 0.4 = 2.4$</p> <p>3rd Answer</p>
3.	<p>In order they are $\frac{1}{4} = 0.25$, $\frac{2}{4} = \frac{1}{2} = 0.5$, $\frac{3}{4} = 0.75$, $\frac{5}{8} = 0.625$</p> <p>2nd Answer</p>
4.	<p>$\frac{145}{1000} = 0.145$</p> <p>3rd Answer</p>
5.	<p>$0.24 = \frac{24}{100} = \frac{12}{50} = \frac{6}{25}$</p> <p>4th Answer</p>
6.	<p style="text-align: center;"> $0.47 + 4.7 =$ $0.47 +$ $\begin{array}{r} 4.7 \\ \hline 5.17 \end{array}$ </p> <p>4th Answer</p>

Question	Working and Answer
7.	$\begin{array}{r} 0.24 \times \\ \underline{8} \\ 1.92 \end{array}$ 2nd Answer
8.	$\begin{array}{r} 4.78 - \\ \underline{3.65} \\ 1.13 \end{array}$ 1st Answer
9.	$\begin{array}{r} 4.5 + \\ 8.45 \\ \underline{12.3} \\ 25.25 \end{array}$
10.	$\begin{array}{r} 6.5 - \\ \underline{1.8} \\ 4.7 \end{array}$
11.	$\begin{array}{r} 5.3 \times \\ \underline{6} \\ 31.8 \end{array}$
12.	124.8624 = 124.9 (to nearest tenth)
13.	In the number 0.000 39, the 3 is in the 4 th decimal place which is ten thousandths 3rd Answer
14.	$0.012\ 5 \times 1000 = 12.5$ (move the decimal point 3 places) 2nd Answer
15.	$\begin{array}{r} 18.6 \times \\ \underline{0.5} \\ 9.30 \end{array}$ 9.3
16.	$\begin{array}{r} 5.40 - \\ \underline{2.87} \\ 2.53 \end{array}$

Question	Working and Answer
17.	<p>From 0.512 TB, 1.24 TB and 0.384 TB, largest is 1.24 TB and smallest is 0.384 TB</p> <p>Difference is $1.24 - 0.384$</p> $\begin{array}{r} 1.240 - \\ 0.384 \\ \hline 0.856 \end{array}$ <p>0.856 TB</p>
18.	$\begin{array}{r} 4.75 + \\ 10.60 \\ 8.00 \\ 1.20 \\ \hline 24.55 \end{array}$
19.	$\begin{array}{r} 1.44 \\ 6 \overline{)8.64} \end{array}$
20.	$\begin{array}{r} 1.36 \times \\ 30 \\ (40.80) \end{array}$ <p>Total weight 40.8 grams</p>
21.	$\begin{array}{r} 8.00 - \\ 1.35 \\ \hline 6.65 \end{array}$
22.	$\begin{array}{r} 0.375 \\ 12 \overline{)4.500} \end{array}$
23.	$22.95 \div 100 = \mathbf{0.2295}$
24.	$18.1258 = \mathbf{18.126}$ (3 d.p.)
25.	$\begin{array}{r} 20.00 - \\ 2.28 \\ \hline 17.72 \end{array}$
26.	$5 \times 10 + 6 \times 1 + 7 \times \frac{1}{100} = \mathbf{56.07}$

Question	Working and Answer
27.	$12.5 + 6.4 + 9.24 + 5.06 + 4.5 = 37.7$ $\text{Average} = \frac{37.7}{5}$ $= \mathbf{7.54}$
28.	$\begin{array}{r} 12.48 \times \\ 0.9 \\ \hline 11.232 \end{array}$
29.	$\begin{array}{r} \mathbf{0.0483} \\ 50 \overline{)2.415} \end{array}$
30.	$\begin{aligned} 0.9^3 &= 0.9 \times 0.9 \times 0.9 \\ &= 0.81 \times 0.9 \\ &= \mathbf{0.729} \end{aligned}$

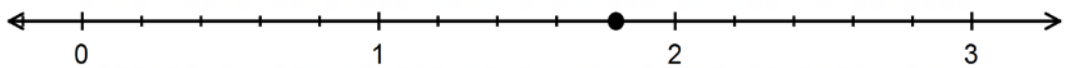
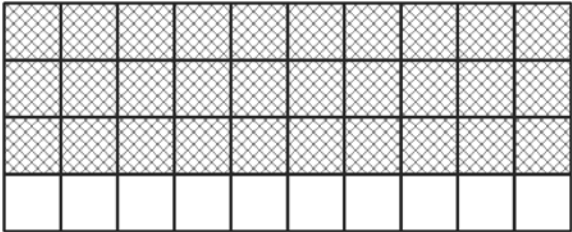
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Question	Working and Answer
1.	<p>5 places between 1 and 2, so each is 0.2</p> <p>Place the dot 4 places along from 1 to give $1 + 0.8 = 1.8$</p> 
2.	<p>There are 40 squares, so $0.75 \times 40 = 30$</p> <p>Shade any 30 squares. e.g. top 3 rows.</p> 
3.	<p>Distance through $C = 62.5 + 73.1 = 135.6$</p> <p>Distance saved = $135.6 - 94.8 = \mathbf{40.8 \text{ km}}$</p>
4.	<p>Mass = $0.84 + 0.0095 \times 4$</p> <p style="padding-left: 20px;">$= 0.84 + 0.038$</p> <p style="padding-left: 20px;">$= \mathbf{0.878 \text{ kg}}$</p>
5.	<p>$12.8 \times 0.059 = 0.7552$</p> <p style="padding-left: 40px;">$= 0.76 \text{ (2 decimal places)}$</p> <p>3rd Answer</p>

6.	$0.5 < 0.45 \Rightarrow 0.50 < 0.45$ which is not true. 4th Answer
7.	$0.24 \div 0.012 = 20$ piles 2nd Answer
8.	$\begin{aligned}\text{Average} &= \frac{0.256 + 1.4 + 0.824 + 1.05}{4} \\ &= \frac{3.53}{4} \\ &= \mathbf{0.8825 \text{ kg}}\end{aligned}$
9.	0.425, 0.45, 0.54, 4.2, 4.25, 4.5
10.	Smallest possible value is greater than $0 \times 1 = 0$ Largest possible value is less than $0.5 \times 2 = 1$ $0 < z < 1$ 1st Answer

