High School
Mathematics Test 2014

Decimals

Year 7

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_____

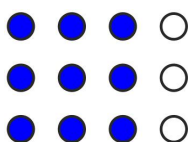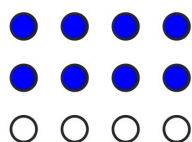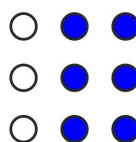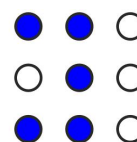*Answer all questions in the spaces provided on this test paper by:*
  Writing the answer in the box provided.
    or
  Shading in the bubble for the correct answer from the four choices provided.
*Show any working out on the test paper. Calculators are **not** allowed.*

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1. Which group below has 0.75 of the dots shaded?

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2. Which decimal is equivalent to $\frac{4}{5}$?

☐ 0.4　　　☐ 0.45　　　☐ 0.8　　　☐ 4.5
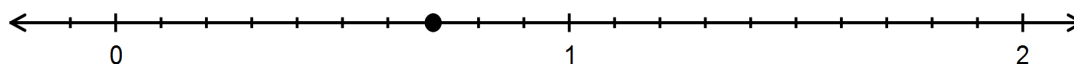
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3. Which fraction is equivalent to 0.12?

☐ $\frac{1}{8}$　　　☐ $\frac{3}{25}$　　　☐ $\frac{1}{12}$　　　☐ $\frac{1}{4}$

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

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5. $0.8 + 1.6 = ?$

☐ 0.96　　　☐ 1.68　　　☐ 2.4　　　☐ 9.6

6.	Add the decimals 2.5, 0.25 and 0.9.
7.	$4.8 - 1.5 = ?$
8.	$0.68 - 0.27 = ?$ ☐ 0.41 ☐ 0.663 ☐ 0.69 ☐ 4.1
9.	$4.5 \times 6 = ?$
10.	$0.348 \times 5 = ?$
11.	Round 37.2579 correct to the nearest tenth
12.	What is the value of the 6 digit in the number 35.267? ☐ Units ☐ Tenths ☐ Hundredths ☐ Thousandths
13.	$0.258 \times 100 = ?$ ☐ 0.0258 ☐ 2.58 ☐ 25.8 ☐ 258
14.	What is the sum of 4.69, 0.135, 0.07 and 2.75?
15.	$5.4 - 2.36 = ?$
16.	$27.8 - 2.625 = ?$ ☐ 1.55 ☐ 25.15 ☐ 25.175 ☐ 26.25
17.	Add 34.29 to 125.45.

18.	3.6 is taken from 7.25. What is the result?

19.	8.34 × 6 = ?

☐ 1.39   ☐ 14.34   ☐ 41.7   ☐ 50.04

20.	0.007 38 × 1 000 = ?

21.	Kayla buys 8 memory sticks which each have a capacity of 6.5 GB. What is the total capacity of the 8 sticks?

22.	16.52 ÷ 7 = ?

☐ 0.236   ☐ 0.952   ☐ 2.36   ☐ 9.52

23.	182.58 ÷ 100 = ?

☐ 0.18258   ☐ 1.8258   ☐ 18.258   ☐ 1 825.8

24.	What is the product of 2.54 and 8 ?

25.	When 8.5 is divided by 5, the result is:

☐ 0.17   ☐ 1.07   ☐ 1.7   ☐ 17

26.	Donald cut a 6.8 metre length of timber into 4 equal length pieces. How long was each piece? (Give your answer as a decimal.)

27.	The number 4.35 could be expressed in expanded notation as:

☐ $4 \times 1 + 3 \times \dfrac{1}{10} + 5 \times \dfrac{1}{100}$ ☐ $4 \times \dfrac{1}{10} + 3 \times \dfrac{1}{100} + 5 \times \dfrac{1}{1000}$

☐ $4 \times 1 + 3 \times \dfrac{1}{100} + 5 \times \dfrac{1}{1000}$ ☐ $4 \times 1 + 3 \times \dfrac{1}{10} + 5 \times \dfrac{1}{1000}$

28.	Riley makes six napkins which each use 0.15 square metres of fabric. If no fabric is wasted in making the napkins, how much fabric is used, correct to the nearest tenth of a metre?

29.	4.37 × 0.03 = ? 0.01311 ☐ 0.1311 ☐ 1.311 ☐ 13.11 ☐

30.	1.24 × 0.8 = ?

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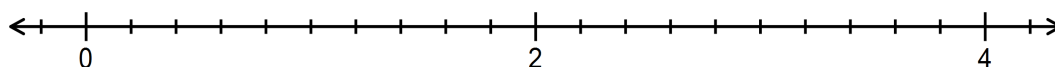*Answer all questions in the spaces provided on this test paper by:*
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    or
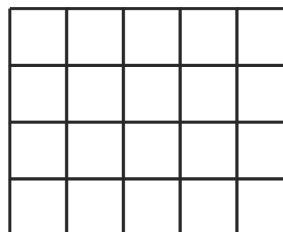 *Shading in the bubble for the correct answer from the four choices provided.*
Show any working out on the test paper. Calculators are allowed.

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

2.	Shade a section which is 0.7 of the area of this rectangle.

3.	Micah measured the mass of the contents of his backpack. There were 4 items which weighed 2.5 kg, 0.4 kg, 1.9kg, and 0.75 kg. If the backpack itself weighs 0.85 kg, what is the weight of the full backpack?

4.	Jacquie wants to weld two straight pieces of metal together to make a total length of 25.5 metres. The length of one piece is 12.65 m. What is the length of the second piece?

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

53   53.5   53.47   53.48
☐   ☐   ☐   ☐

6.	Polly bought 6.25 litres of putty for an art project. Each litre of the putty weighs 0.6 kg. What does all of the putty weigh?
7.	Andrew buys 0.6 kg of potatoes which costs him \$1.65. What is the cost per kilogram of the potatoes? \$ ☐ .
8.	In a dancing competition, each couple are given a score out of 10, and then their average score is found by adding their scores and dividing by the number of scores. Lydia and Kegan have the five scores below. Work out their average score. 6.5, 8.2, 9.4, 8.9, 7.8.
9.	When running, Lara's average stride length is 3.2 metres. How many strides does she take in a 100 metre foot race?
10.	Arrange the numbers below in ascending order. 0.64, 0.06, 0.46, 6.4, 0.046, 4.6 ☐ ☐ ☐ ☐ ☐ ☐
11.	A number is divided by a decimal between 0.5 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 could be smaller or larger than the original number.
12.	Which is **not** true? ☐ 0.85 > 0.7 ☐ 0.7 < 0.75 ☐ 0.54 < 0.64 ☐ 0.05 > 0.2

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ANSWERS

Non Calculator Section (1 mark each)

Q no	
1.	$0.75 = \dfrac{3}{4}$, so the first diagram has $\dfrac{3}{4}$ shaded.　　(1st Answer)
2.	$\dfrac{4}{5} = 4 \div 5 = 5\overline{)4.0} = 0.8$　　　(3rd Answer)
3.	$0.12 = \dfrac{12}{100} = \dfrac{3}{25}$　　　(2nd Answer)
4.	0.7
5.	$0.8 + 1.6 = 2.4$　　　(3rd Answer)
6.	$2.5 + 0.25 + 0.9 = 3.65$
7.	$4.8 - 1.5 = 3.3$
8.	$0.68 - 0.27 = 0.41$　　　(1st Answer)
9.	$4.5 \times 6 = 27$
10.	$0.348 \times 5 = 1.74$
11.	37.3
12.	Hundredths　　　(3rd Answer)
13.	$0.258 \times 100 = 25.8$　　　(3rd Answer)
14.	$4.69 + 0.135 + 0.07 + 2.75 = 7.645$
15.	$5.4 - 2.36 = 3.04$
16.	$27.8 - 2.625 = 25.175$　　　(3rd Answer)
17.	$34.29 + 125.45 = 159.74$
18.	$7.25 - 3.6 = 3.65$
19.	$8.34 \times 6 = 50.04$　　　(4th Answer)
20.	$0.007\,38 \times 1\,000 = 7.38$

21.	$8 \times 6.5 = 52$ *GB*	
22.	$16.52 \div 7 = 2.36$	(3ʳᵈ Answer)
23.	$182.58 \div 100 = 1.8258$	(2ⁿᵈ Answer)
24.	$2.54 \times 8 = 20.32$	
25.	$8.5 \div 5 = 1.7$	(3ʳᵈ Answer)
26.	$6.8 \div 4 = 1.7$ *m*	
27.	$4 \times 1 + 3 \times \dfrac{1}{10} + 5 \times \dfrac{1}{100}$	(1ˢᵗ Answer)
28.	$6 \times 0.15 = 0.9$ m^2	
29.	$4.37 \times 0.03 = 0.1311$	(2ⁿᵈ Answer)
30.	$1.24 \times 0.8 = 0.992$	

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	Calculator Allowed Short Answer Section (1 mark each)

Q no	
1.	
2.	$0.7 \times 20 = 14$
3.	$2.5 + 0.4 + 1.9 + 0.75 + 0.85 = 6.4$ kg
4.	$25.5 - 12.65 = 12.85\ m$
5.	53.48 (4th Answer)
6.	$6.25 \times 0.6 = 3.75$ kg
7.	$1.65 \div 0.6 = \$2.75 /$ kg
8.	Average $= \dfrac{6.5 + 8.2 + 9.4 + 8.9 + 7.8}{5}$ $= \dfrac{40.8}{5}$ $= 8.16$
9.	No Strides $= 100 \div 3.2$ $= 31.25$ strides
10.	0.046, 0.06, 0.46, 0.64, 4.6, 6.4
11.	The answer will always be bigger than the original number. (3rd Answer)
12.	$0.05 > 0.2$ is not true . (4th Answer)