Q.1. The positive root of 225 is _____   **(1)**

Q.2. Work out the following.   **(2)**

    a. $4 \times (231000 \div 10^6)$

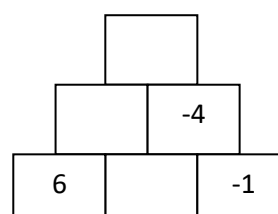   b. $(3.6 \times 10^4) + 15000 \div 3$
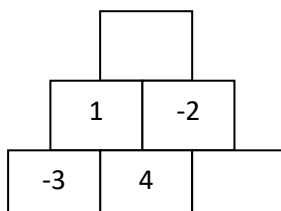
Q.3. Round each of these numbers to two decimal places.   **(2)**

    a. 2.473 = _____   c. 8.065 = _____

    b. 1.938 = _____

Q.4. Copy and complete these addition pyramids.   **(2)**

Pyramid 1:
- Bottom row: -3, 4
- Middle row: 1, -2
- Top: (blank)

Pyramid 2:
- Bottom row: 6, (blank), -1
- Middle row: (blank), -4
- Top: (blank)

Q.5. a. Show that 67108 is divisible by 4. **(1)**

_____

_____

b. Is 67108 divisible by 8? Give a reason for your answer. **(1)**

_____

_____

_____

_____

Q.6. The light from two lighthouse flash at regular intervals of 7 minutes and 14 minutes respectively. Both lights first flash together at 8 p.m. What is the next time they will flash together again? **(2)**

_____

_____

_____

_____

Q.7. Evaluate $2 \div \sqrt[3]{(-1)^2} + 7$ **(1)**

Q.8. Put the following in order of size, starting with the smallest. **(1)**
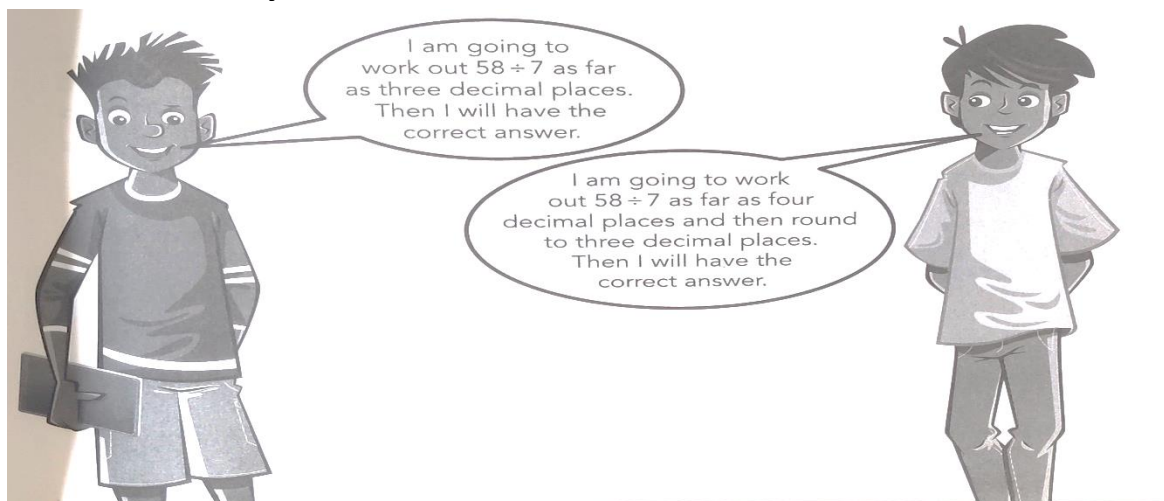
$2110 \div 100$ $\qquad$ 0.208×100 $\qquad$ 1.9×10 $\qquad$ $2320 \div 1000$ $\qquad$ 0.23×10

_____

_____

Q.9. Shaun and four fiends eat a meal at a restaurant. The total cost of the meal is $68.60. Shaun eats chicken korma $9.45, pilau rice $2.20 and a plain naan $1.95. Is it better for Shaun to pay for his own food or to pay for an equal share of the bill? **(2)**

_____

_____

_____

_____

_____

Q.10. Marcus and Arun both work out 58 ÷ 7, correct to three decimal places. Here are the methods they use.

I am going to work out 58 ÷ 7 as far as three decimal places. Then I will have the correct answer.

I am going to work out 58 ÷ 7 as far as four decimal places and then round to three decimal places. Then I will have the correct answer.

a. Work out 58 ÷ 7 using Marcus's method and Razi's method. **(1)**

b. Do you get the same answer? **(1)**

_____

c. Whose method gives the correct answer? Explain why. **(1)**

_____

_____

Q.11. Find the HCF of 48 and 90 using prime factorization. **(2)**

_____

_____

_____

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