5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

1. Determine the product. 4238

X 32

2. Determine the quotient.

335 ÷ 5

3. Which equation has the same unknown value as 228 ÷ 12 = □?

A. 228 x □ = 12

B. 12 x □ = 228

C. □ ÷ 12 = 228

D. □ ÷ 228 = 12

4. Determine the value of □ in the equation 18.9 + □ = 33.74.

5. Which equation shows a correct strategy and product for the expression 0.4 x 0.8?

A. x = B. x =

C. x = D. x =

6. Edward bikes the same route to and from school each day. After 28 school days, he bikes a total distance of 389.2 miles.

a. Estimate how many miles he bikes in one day.

b. If Edward continues his routine of biking to school, about how many days altogether will it take him to reach a total of 500 miles?

7. 156 ÷ 24 and 102 ÷ 15 both have a quotient of 6 and a remainder of 12.

Are the division expressions equivalent to each other? Use your knowledge of decimal division to justify your answer.

8. Michael has a collection of 1,404 sports cards. He hopes to sell the collection in packs of 36 cards, and make $633.75 when all the packs are sold. If each pack is priced the same, how much should Michael charge per pack?

**Teacher Material**

5.NBT.B

Perform operations with multi-digit whole numbers and with decimals to hundredths.

| **Question** | **Claim** | **Key/Suggested Rubric** |
| --- | --- | --- |
| 1[[1]](#footnote-1) | 1 | **1 point:** 135,616 |
| 21 | 1 | **1 point:** 67 |
| 31 | 1 | **1 point:** Selects B |
| 41 | 1 | **1 point:** 14.84 |
| 51 | 1 | **1 point:** Selects B |
| 6a[[2]](#footnote-2) | 4 | **1 point:** Answers may vary.  If I round 389.2 to 390 and 28 to 30, then 390 ÷ 30 = 13. So, Edward bicycled about 13 miles a day. |
| 6b² | 4 | **1 point:** Answers may vary.  If he goes about 13 miles a day and has 110 (500 - 390) miles more to go, it has to be less than 10 more days because 13 x 10 = 130. I would say it takes about 8 more days so it will take him about 38 days to ride 500 miles. |
| 7[[3]](#footnote-3) | 3 | **1 point:** Answers may vary  They are not equivalent. In the first problem, the divisor is 24. A remainder of 12 is only 0.5 of the next group of 24. In the second problem, the divisor is 15. 12 is 0.8 of 15 so in this case the quotient is closer to 7 than in the first problem. |
| 8[[4]](#footnote-4) | 2 | **1 point:** 1404 ÷ 36 = 39 If all the packs are to be the same price, then  $633.75 ÷ 39 = $16.25 a pack. Michael should sell them for $16.25 a pack. |

1. From Smarterbalanced.org. Grade 5, Claim 1, Target D Item Specifications. Internet. Available from <http://www.smarterbalanced.org/smarter-balanced-assessments/>; accessed 11/2015. [↑](#footnote-ref-1)
2. From EngageNY.org of the New York State Education Department. Grade 5 Mathematics Module 2, Topic G, Lesson 25. Internet. Available from <https://www.engageny.org/resource/grade-5-mathematics-module-2-topic-g-lesson-25>; accessed 11/2015. [↑](#footnote-ref-2)
3. From EngageNY.org of the New York State Education Department. Grade 5 Mathematics Module 2, Topic G, Lesson 26. Internet. Available from <https://www.engageny.org/resource/grade-5-mathematics-module-2-topic-g-lesson-26>; accessed 11/2015. [↑](#footnote-ref-3)
4. From EngageNY.org of the New York State Education Department. Grade 5 Mathematics Module 2, Topic H, Lesson 28. Internet. Available from <https://www.engageny.org/resource/grade-5-mathematics-module-2-topic-h-lesson-28>; accessed 11/2015. [↑](#footnote-ref-4)