Multiplication and Division Fluency Set of Tasks

Sample task from achievethecore.org
Task by Karen Fuson, annotation by Student Achievement Partners

GRADE LEVEL Third

IN THE STANDARDS 3.OA.C.7

WHAT WE LIKE ABOUT THIS TASK

Mathematically:

- Part of a carefully considered progression toward fluency and memory with single-digit products (3.OA.C.7)
- Multiplication and division equations are mixed together to reinforce the relationship between them (3.OA.B.6)
- Randomness of equations ensures students are mindful when answering
- Explicitly makes the relationship between multiplication and division clear (3.OA.B.6)
- Connects to the Commutative property of multiplication (3.OA.B.5)

In the classroom:

- Offers one of the many opportunities for students to practice their facts to ensure fluency
- May be tailored to include sets of numbers other than those represented here
- Represents multiplication and division with a variety of symbols
- Allows for both individual and paired work
- Builds fluency in an engaging way
- Contains blank cards for students to use

MAKING THE SHIFTS[1]

 Focus	Belongs to the major work[2] of third grade
 Coherence	Develops fluencies that students will rely on in subsequent grades as they multiply and divide multi-digit whole numbers, multiply and divide fractions and decimals, and work with equivalent ratios as preparation for understanding proportional relationships
 Rigor[3]	Conceptual Understanding: not targeted in this set of tasks
	Procedural Skill and Fluency: primary in this set of tasks
	Application: not targeted in this set of tasks

[1]For more information read Shifts for Mathematics.
[2]For more information, see Focus in Grade Three.
[3]Tasks will often target only one aspect of rigor.

ADDITIONAL THOUGHTS

Reaching fluency in single-digit multiplications and related divisions takes time and practice. Students will need many opportunities and varying activities to develop fluency with single-digit multiplication and division. This set of tasks is an excerpt from a larger document that can be found here (PDF).

For more on how students can gain fluency in multiplication and division in grade 3, read pages 25–27 of the progression document, *K Counting and Cardinality; K–5 Operations and Algebraic Thinking* (the section titled "Levels in problem representation and solution"), available on www.achievethecore.org/progressions.

For a direct link, go to: http://www.achievethecore.org/page/841/multiplication-and-division-fluency-set-of-tasks

Name _____ Date _____

▶ Checkup B: 2s, 5s, 9s, 3s, 4s, 1s, 0s

1. 5 * 3 = ___
2. 1 • 5 = ___
3. 9 × 5 = ___
4. 9 × 3 = ___
5. 4 • 8 = ___
6. 8 * 3 = ___
7. 8 × 2 = ___
8. 10 • 4 = ___
9. 7 * 5 = ___
10. 1 × 10 = ___
11. 81 / 9 = ___
12. 5 * 4 = ___
13. 9 × 7 = ___
14. 5 • 6 = ___
15. 7 * 4 = ___
16. 6 × 9 = ___
17. 10 • 8 = ___
18. 2 * 6 = ___
19. $2\overline{)6}$
20. 10 ÷ 5 = ___
21. 4 / 2 = ___
22. 40 ÷ 5 = ___
23. 18 / 9 = ___
24. 21 ÷ 7 = ___
25. 36 / 9 = ___
26. 16 ÷ 2 = ___
27. $5\overline{)15}$
28. 90 ÷ 9 = ___
29. 35 ÷ 5 = ___
30. 0 / 10 = ___
31. $\frac{45}{5}$ = ___
32. 18 / 2 = ___
33. $9\overline{)72}$
34. 25 ÷ 5 = ___
35. 63 / 9 = ___
36. 12 / 2 = ___
37. $9\overline{)27}$
38. $\frac{24}{6}$ = ___
39. 8 ÷ 2 = ___
40. 9 ÷ 9 = ___
41. 50 / 5 = ___
42. $2\overline{)20}$
43. 54 ÷ 9 = ___
44. $10\overline{)10}$
45. $\frac{15}{3}$ = ___
46. 10 • 6 = ___
47. 20 ÷ 10 = ___
48. $\frac{70}{10}$ = ___
49. $5\overline{)30}$
50. 80 / 10 = ___
51. $\frac{72}{9}$ = ___
52. 20 / 5 = ___
53. $2\overline{)14}$
54. 60 ÷ 10 = ___
55. 8 * 5 = ___
56. 4 × 3 = ___
57. 3 × 2 = ___
58. 8 × 3 = ___
59. 3 • 3 = ___
60. 7 * 3 = ___
61. 0 * 9 = ___
62. 2 * 4 = ___
63. 5 • 10 = ___
64. 4 × 9 = ___
65. 7 • 2 = ___
66. 10 * 3 = ___
67. 7 × 10 = ___
68. 3 * 6 = ___
69. 4 * 4 = ___
70. 2 • 0 = ___
71. 7 * 4 = ___
72. 10 × 10 = ___

Name _____ Date _____

▶ Play a Game

Play *High Card Wins* with your partner.

Rules for *High Card Wins*

Number of players: 2
What you will need: Product Cards: 2s, 3s, 4s, 5s, 9s

1. Shuffle the cards. Deal all the cards evenly between the two players.

2. Players put their stacks in front of them, multiplication side up.

3. Each player takes the top card from his or her stack and puts it multiplication side up in the center of the table.

4. Each player says the answer and then turns the card over to check. Then do one of the following:

- If one player says the wrong answer, the other player takes both cards and puts them at the bottom of his or her pile.
- If both players say the wrong answer, both players take back their cards and put them at the bottom of their piles.
- If both players say the correct answer, the player with the higher product takes both cards and puts them at the bottom of his or her pile. If the products are the same, the players set the cards aside and play another round. The winner of the next round takes all the cards.

5. Play continues until one player has all the cards.

3×2 Hint: What is 2×3? 	$3 \cdot 3$ 	$3 * 4$ Hint: What is $4 * 3$? 	3×5 Hint: What is 5×3?
3×6 Hint: What is 6×3? 	$3 \cdot 7$ Hint: What is $7 \cdot 3$? 	$3 * 8$ Hint: What is $8 * 3$? 	3×9 Hint: What is 9×3?
4×2 Hint: What is 2×4? 	$4 \cdot 3$ Hint: What is $3 \cdot 4$? 	$4 * 4$ 	4×5 Hint: What is 5×4?
4×6 Hint: What is 6×4? 	$4 \cdot 7$ Hint: What is $7 \cdot 4$? 	$4 * 8$ Hint: What is $8 * 4$? 	4×9 Hint: What is 9×4?

$3\overline{)15}$

Hint: What is $\square \times 3 = 15$?

$3\overline{)12}$

Hint: What is $\square \times 3 = 12$?

$3\overline{)9}$

Hint: What is $\square \times 3 = 9$?

$3\overline{)6}$

Hint: What is $\square \times 3 = 6$?

$3\overline{)27}$

Hint: What is $\square \times 3 = 27$?

$3\overline{)24}$

Hint: What is $\square \times 3 = 24$?

$3\overline{)21}$

Hint: What is $\square \times 3 = 21$?

$3\overline{)18}$

Hint: What is $\square \times 3 = 18$?

$4\overline{)20}$

Hint: What is $\square \times 4 = 20$?

$4\overline{)16}$

Hint: What is $\square \times 4 = 16$?

$4\overline{)12}$

Hint: What is $\square \times 4 = 12$?

$4\overline{)8}$

Hint: What is $\square \times 4 = 8$?

$4\overline{)36}$

Hint: What is $\square \times 4 = 36$?

$4\overline{)32}$

Hint: What is $\square \times 4 = 32$?

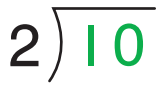
$4\overline{)28}$

Hint: What is $\square \times 4 = 28$?

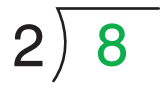
$4\overline{)24}$

Hint: What is $\square \times 4 = 24$?

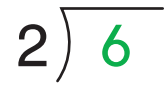
2×2	$2 \cdot 3$	$2 * 4$	2×5
	Hint: What is $3 \cdot 2$?	Hint: What is $4 * 2$?	Hint: What is 5×2?
2×6	$2 \cdot 7$	$2 * 8$	2×9
Hint: What is 6×2?	Hint: What is $7 \cdot 2$?	Hint: What is $8 * 2$?	Hint: What is 9×2?
5×2	$5 \cdot 3$	$5 * 4$	5×5
Hint: What is 2×5?	Hint: What is $3 \cdot 5$?	Hint: What is $4 * 5$?	
5×6	$5 \cdot 7$	$5 * 8$	5×9
Hint: What is 6×5?	Hint: What is $7 \cdot 5$?	Hint: What is $8 * 5$?	Hint: What is 9×5?



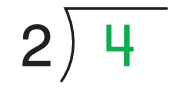
Hint: What is
□ × 2 = 10?



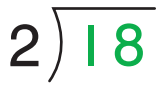
Hint: What is
□ × 2 = 8?



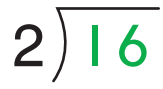
Hint: What is
□ × 2 = 6?



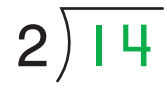
Hint: What is
□ × 2 = 4?



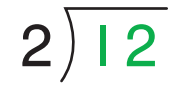
Hint: What is
□ × 2 = 18?



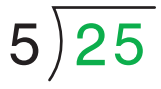
Hint: What is
□ × 2 = 16?



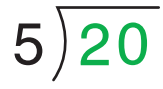
Hint: What is
□ × 2 = 14?



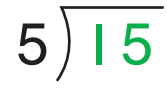
Hint: What is
□ × 2 = 12?



Hint: What is
□ × 5 = 25?

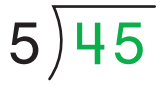


Hint: What is
□ × 5 = 20?

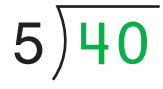


Hint: What is
□ × 5 = 15?

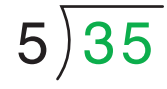
Hint: What is
□ × 5 = 10?



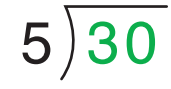
Hint: What is
□ × 5 = 45?



Hint: What is
□ × 5 = 40?



Hint: What is
□ × 5 = 35?



Hint: What is
□ × 5 = 30?

9×2 Hint: What is 2×9? 	$9 \cdot 3$ Hint: What is $3 \cdot 9$? 	$9 * 4$ Hint: What is $4 * 9$? 	9×5 Hint: What is 5×9?
9×6 Hint: What is 6×9? 	$9 \cdot 7$ Hint: What is $7 \cdot 9$? 	$9 * 8$ Hint: What is $8 * 9$? 	9×9
$\times$	$\cdot$	$*$	$\times$
$\times$	$\cdot$	$*$	$\times$

You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.

$9\overline{)45}$ Hint: What is $\square \times 9 = 45$? 	$9\overline{)36}$ Hint: What is $\square \times 9 = 36$? 	$9\overline{)27}$ Hint: What is $\square \times 9 = 27$? 	$9\overline{)18}$ Hint: What is $\square \times 9 = 18$?
$9\overline{)81}$ Hint: What is $\square \times 9 = 81$? 	$9\overline{)72}$ Hint: What is $\square \times 9 = 72$? 	$9\overline{)63}$ Hint: What is $\square \times 9 = 63$? 	$9\overline{)54}$ Hint: What is $\square \times 9 = 54$?
$9\overline{)\quad}$	$9\overline{)\quad}$	$9\overline{)\quad}$	$9\overline{)\quad}$
$9\overline{)\quad}$	$9\overline{)\quad}$	$9\overline{)\quad}$	$9\overline{)\quad}$

You can write any numbers on the last 8 cards. Use them to practice difficult problems or if you lose a card.