

Multiplication and Division of Integers

Unit: Integers - Student Practice Worksheet

Overview: Kabir multiplied two negative numbers and got a negative answer — and was marked wrong. Anaya explained it with a video-game rule: two enemies (negatives) team up and become a friend (positive). Once he had a rule for the SIGN separate from the number, integer multiplication stopped being scary.

Practice Questions (30 Total)

Section A - Easy

Q1. Four maroon -3 tiles. What is $(-3) \times 4$?



- ☐ A. -12
- ☐ B. 12
- ☐ C. 7
- ☐ D. -7

Q2. Multiplying two negative numbers gives a result that is:

- ☐ A. Always negative
- ☐ B. Always zero
- ☐ C. Always positive
- ☐ D. Impossible to determine

Q3. Find: $(-3) \times (-4)$, two negatives together.

- ☐ A. -12
- ☐ B. 12
- ☐ C. -7
- ☐ D. 7

Q4. The card is $(-20) \div (-4)$, same signs. What is the quotient?

$$(-20) \div (-4)$$

- ☐ A. 5
- ☐ B. -5
- ☐ C. 16
- ☐ D. -16

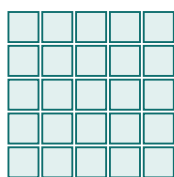
Q5. Multiplying a positive and a negative number gives a result that is:

- ☐ A. Always positive
- ☐ B. Always zero
- ☐ C. Sometimes positive, sometimes negative
- ☐ D. Always negative

Q6. Find: $20 \div (-4)$, one negative and one positive.

- ☐ A. 5
- ☐ B. -5
- ☐ C. 16
- ☐ D. 24

Q7. The 5-by-5 grid is $(-5) \times (-5)$. What product is that?



$(-5) \times (-5)$

- ☐ A. -25
- ☐ B. -10
- ☐ C. 25
- ☐ D. 10

Q8. Division follows the same sign rules as:

- ☐ A. Multiplication
- ☐ B. Addition
- ☐ C. Subtraction

☐ **D.** None of these

Q9. Find: $6 \times (-7)$.

☐ **A.** 42

☐ **B.** 13

☐ **C.** -13

☐ **D.** -42

Q10. Compute $(-15) \div 3$, then name the sign rule that matches.

☐ **A.** 5

☐ **B.** -5

☐ **C.** 54

☐ **D.** -54

Section B - Medium

Q11. The strip adds -3 four times. What is that total?

$$(-3)+(-3)+(-3)+(-3)$$

☐ **A.** -12

☐ **B.** 12

☐ **C.** 1

☐ **D.** -1

Q12. Ms. Rao's pattern table showed $0 \times (-4) = 0$. What does the pattern predict for $-1 \times (-4)$?

☐ **A.** -4

☐ **B.** 4

☐ **C.** 0

☐ **D.** -8

Q13. Find: $(-8) \times (-9)$.

☐ **A.** -72

☐ **B.** -17

☐ C. 72

☐ D. 17

Q14. Five drops of 12 m each. What is $(-12) \times 5$?

5 drops of 12 m
 $(-12) \times 5$

☐ A. 60 m

☐ B. -60 m

☐ C. 17 m

☐ D. -17 m

Q15. A temperature drops by 3 degrees every hour for 6 hours. What is the total change, as an integer?

☐ A. -18 degrees

☐ B. 18 degrees

☐ C. 9 degrees

☐ D. -9 degrees

Q16. Find: $(-100) \div 25$.

☐ A. 4

☐ B. 75

☐ C. -75

☐ D. -4

Q17. The cards are 7 and -7. What is $7 \times (-7)$?

7 x -7

☐ A. 49

☐ B. 0

☐ C. 14

☐ D. -49

Q18. Find: $(-81) \div (-9)$.

- ☐ A. -9
- ☐ B. 9
- ☐ C. -90
- ☐ D. 90

Q19. Find: $(-15) \times (-6)$.

- ☐ A. 90
- ☐ B. -90
- ☐ C. -21
- ☐ D. 21

Q20. Divide (-48) by (-4) and check with the same-sign rule. What is the quotient?

- ☐ A. -12
- ☐ B. -156
- ☐ C. 12
- ☐ D. 156

Section C - Challenge

Q21. Three factors: $(-2) \times (-3) \times (-4)$. What product?

$$(-2) \times (-3) \times (-4)$$

- ☐ A. -24
- ☐ B. 24
- ☐ C. 9
- ☐ D. -9

Q22. Anaya notices: multiplying an EVEN number of negative integers together always gives a positive result, while an ODD number gives a negative result. Why?

- ☐ A. Because even numbers are always bigger
- ☐ B. Because odd numbers cannot be multiplied
- ☐ C. Because each pair of negatives cancels to a positive, leaving one negative unpaired only when the count is odd

- ☐ **D.** There is no real reason, it's a coincidence

Q23. Find: $(-2) \times (-3) \times (-4) \times (-5)$.

- ☐ **A.** -120
- ☐ **B.** 120
- ☐ **C.** 14
- ☐ **D.** -14

Q24. 24 is divided by -1 three times. What remains after three flips?

$$24 \rightarrow /(-1) \rightarrow /(-1) \rightarrow /(-1)$$

three sign flips

- ☐ **A.** 24
- ☐ **B.** 8
- ☐ **C.** -8
- ☐ **D.** -24

Q25. Kabir claims: '(-1) raised to any power always gives either 1 or -1.' Is this true?

- ☐ **A.** No, it can give any number
- ☐ **B.** Only true for the power of 2
- ☐ **C.** Only true for the power of 1
- ☐ **D.** Yes — an even power gives 1, an odd power gives -1

Q26. Find x: $(-6) \times x = 42$.

- ☐ **A.** -7
- ☐ **B.** 7
- ☐ **C.** 8
- ☐ **D.** -8

Q27. Maroon 12 losses of 500, teal 8 gains of 300. What is the net?

12 x (-500)

8 x 300

- ☐ **A.** 3600

- ☐ B. -2400
- ☐ C. -3600
- ☐ D. 1200

Q28. Why does Ms. Rao's counting-down pattern ($3 \times (-4)$, $2 \times (-4)$, $1 \times (-4)$, $0 \times (-4)$...) prove the sign rule rather than just illustrate it?

- ☐ A. It doesn't prove anything, it's just a coincidence
- ☐ B. Because the pattern's own consistent step size forces the next value logically, without needing an arbitrary rule to be memorised
- ☐ C. Because the pattern only works for the number 4
- ☐ D. Because patterns can never prove mathematical rules

Q29. Find x: $(-8) \times x = -56$.

- ☐ A. -7
- ☐ B. 7
- ☐ C. 8
- ☐ D. -8

Q30. Multiply any integers by 0. What result, and why does the sign rule not change it?

- ☐ A. 0
- ☐ B. 900
- ☐ C. -900
- ☐ D. Cannot be determined

Answer Key

- Q1:** (A) (a) -12 . Different signs give a negative result.
- Q2:** (C) (c) Always positive — same signs give a positive result.
- Q3:** (B) (b) 12 . Same signs give a positive result.
- Q4:** (A) (a) 5 . Same signs give a positive result.
- Q5:** (D) (d) Always negative — different signs give a negative result.
- Q6:** (B) (b) -5 . Different signs give a negative result.
- Q7:** (C) (c) 25 . Same signs give a positive result.
- Q8:** (A) (a) Multiplication — the same sign logic applies to both.
- Q9:** (D) (d) -42 . Different signs give a negative result.
- Q10:** (B) (b) -5 . Different signs give a negative result.
- Q11:** (A) (a) -12 . -3 added 4 times: $-3-3-3-3=-12$.
- Q12:** (B) (b) 4 . Each step down by 1 raises the answer by 4 , continuing from 0 .
- Q13:** (C) (c) 72 . Same signs give a positive result.
- Q14:** (B) (b) -60 m. $(-12) \times 5 = -60$.
- Q15:** (A) (a) -18 degrees. $(-3) \times 6 = -18$.
- Q16:** (D) (d) -4 . Different signs give a negative result.
- Q17:** (D) (d) -49 . Different signs give a negative result.
- Q18:** (B) (b) 9 . Same signs give a positive result.
- Q19:** (A) (a) 90 . Same signs give a positive result.
- Q20:** (C) (c) 12 . Same signs give a positive result.
- Q21:** (A) (a) -24 . $(-2) \times (-3) = 6$ (positive); $6 \times (-4) = -24$ (different signs).
- Q22:** (C) (c) Each pair of negative signs cancels into a positive; pairing them up leaves nothing unpaired when the count is even, but one negative sign left over when the count is odd.
- Q23:** (B) (b) 120 . Four negative numbers multiplied: an even count of negatives gives a positive result.
- Q24:** (D) (d) -24 . Dividing by -1 flips the sign each time; after 3 flips (odd), the sign ends up negative: $24 \rightarrow -24 \rightarrow 24 \rightarrow -24$.
- Q25:** (D) (d) Yes — since each multiplication by -1 just flips the sign, an even number of flips returns to 1 , an odd number lands on -1 .
- Q26:** (A) (a) -7 . $42 \div (-6) = -7$, since different signs give a negative quotient.
- Q27:** (C) (c) -3600 . Losses: $(-500) \times 12 = -6000$; gains: $300 \times 8 = 2400$; total: $-6000 + 2400 = -3600$.
- Q28:** (B) (b) The pattern's consistent step size ($+4$ each time) logically forces what $-1 \times (-4)$ must equal, deriving the sign rule rather than requiring it to be memorised as an arbitrary fact.
- Q29:** (B) (b) 7 . $-56 \div (-8) = 7$, since same signs give a positive quotient.

Q30: (A) (a) 0. Anything multiplied by zero is always zero, regardless of the other signs.

You've got this! Keep learning and shining! - Ruchi Math Coaching