

Part I: Integers (no decimals or fractions)

1. What is $ 8 + -5 $? (Absolute value)	2. The Bulldogs lost 7 yards on their first play and lost another 4 yards on their next play. What was their net result in yards after these two plays?
3. Desi started the day with a score of 15 points. He lost 49 points, gained 3 points, and then lost 11 points. What was his final score?	4. A shoreline is changing -5 centimeters each year due to erosion. What is the change in the shoreline after 5 years?
5. The temperature on Mars may reach a high of 90°F at the equator in the summer. It may reach a low of -125°F at the poles. Which expression gives the difference between those temperatures?	6. What is the value of $(-4)(-2)(-2)$?
7. Simplify. $(12)(-8)$	8. Simplify. $-35 + (-35)$

Part II; Decimals to Fractions, Fractions to Decimals

9. Write 0.65 as a fraction in lowest terms.	10. Which decimal is equivalent to $-\frac{5}{8}$?
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Part III: Decimal Operations**Test Review**

11. Simplify. $-7.82 + 13.29$	12. A rope that measures 2.48 meters is cut into two pieces. If one piece measures 1.17 meters , what is the length of the other piece?
13. Jesse earns \$6.74 per hour. Last week he worked a 31 hours. How much did he earn?	14. Divide. $-6.126 \div 0.09$

Part IV: Fraction Operations

15. Simplify $-\frac{4}{7} + \frac{1}{2}$	16. Simplify. $-\frac{5}{3} - \frac{4}{9}$	17. Simplify. $1\frac{1}{7} + \left(-5\frac{2}{7}\right)$
18. Simplify. $\left(-\frac{4}{5}\right)\left(\frac{1}{2}\right)$	19. Simplify $-\frac{1}{6} \div \left(-\frac{4}{3}\right)$	20. Simplify. $\left(-\frac{4}{5}\right)\left(-\frac{5}{4}\right)$

Test Review

Unit 1 Test: Operations with Rational Numbers

Part I: Integers (no decimals or fractions)

1. What is $|8| + |-5|$? (Absolute value)

$$8 + 5 = 13$$

note:

$$|8| = 8$$

$$|-5| = 5$$

2. The Bulldogs lost 7 yards on their first play and lost another 4 yards on their next play. What was their net result in yards after these two plays?

$$-7 + -4$$

Add and keep the sign.

$$\boxed{-11 \text{ yards}}$$

3. Desi started the day with a score of 15 points. He lost 49 points, gained 3 points, and then lost 11 points. What was his final score?

$$+15 - 49 + 3 - 11$$

$$15 + -49 = -34$$

$$-34 + 3 = -31$$

$$-31 + -11 = -42$$

$$\boxed{-42 \text{ points}}$$

4. A shoreline is changing -5 centimeters each year due to erosion. What is the change in the shoreline after 5 years?

multiplication

$$(-5)(5) = \boxed{-25 \text{ cm.}}$$

5. The temperature on Mars may reach a high of 90°F at the equator in the summer. It may reach a low of -125°F at the poles. Which expression gives the difference between those temperatures?

$$90 - (-125)$$

6. What is the value of $(-4)(-2)(-2)$?

$$(+8)(-2)$$

$$\boxed{-16}$$

7. Simplify.

$$(12)(-8)$$

$$\boxed{-96}$$

$$\begin{array}{r} 12 \\ \times 8 \\ \hline 96 \end{array}$$

8. Simplify.

$-35 + (-35)$ Same sign:
Add and Keep the sign.

$$\begin{array}{r} 35 \\ + 35 \\ \hline 70 \end{array}$$

$$\boxed{-70}$$

Part II: Decimals to Fractions, Fractions to Decimals

9. Write 0.65 as a fraction in lowest terms.

$$\frac{65}{100} \div 5$$

$$\boxed{\frac{13}{20}}$$

10. Which decimal is equivalent to $-\frac{5}{8}$?

Top dog gets house.

$$\begin{array}{r} 0.625 \\ 8 \overline{) 5.000} \\ \underline{48} \\ 20 \\ \underline{16} \\ 40 \\ \underline{40} \\ 0 \end{array}$$

$$\boxed{-.625}$$

Part III: Decimal Operations

Test Review

11. Simplify.

$$\begin{array}{r} -7.82 + 13.29 \\ \underline{13.29} \\ -7.82 \\ \hline 5.47 \end{array}$$

Different Signs: Subtract

5.47

12. A rope that measures 2.48 meters is cut into two pieces. If one piece measures 1.17 meters, what is the length of the other piece?

Subtract.

$$\begin{array}{r} 2.48 \\ -1.17 \\ \hline 1.31 \text{ meters} \end{array}$$

13. Jesse earns \$6.74 per hour. Last week he worked a 31 hours. How much did he earn?

~~How much did he earn?~~

$$\begin{array}{r} 6.74 \\ \times 31 \\ \hline 674 \\ 2022 \times \\ \hline 20894 \end{array}$$

2 dec places

\$208.94

14. Divide. $-6.126 \div 0.09$ (neg)

$$\begin{array}{r} 0.09 \overline{) 6.126} \\ \underline{68.06} \\ 54 \\ \underline{72} \\ 12 \\ \underline{18} \\ 60 \\ \underline{54} \\ 6 \end{array}$$

-68.06

Part IV: Fraction Operations

15. Simplify $-\frac{4}{7} + \frac{1}{2}$

$$-\frac{4}{7} = -\frac{8}{14}$$

$$\frac{1}{2} = \frac{7}{14}$$

$$-\frac{8}{14} + \frac{7}{14} = \boxed{-\frac{1}{14}}$$

16. Simplify. $-\frac{5}{3} - \frac{4}{9}$

$$-\frac{5}{3} + -\frac{4}{9} = -\frac{15}{9} + -\frac{4}{9} = -\frac{15+4}{9}$$

$-\frac{19}{9}$

17. Simplify.

$$1\frac{1}{7} + (-5\frac{2}{7})$$

$$\frac{8}{7} + -\frac{37}{7}$$

$$\frac{8-37}{7} = \boxed{-\frac{29}{7}}$$

18. Simplify.

$$\left(-\frac{4}{5}\right)\left(\frac{1}{2}\right) =$$

$$-\frac{4}{10} = \boxed{-\frac{2}{5}}$$

19. Simplify

$$-\frac{1}{6} \div \left(-\frac{4}{3}\right)$$

$$-\frac{1}{6} \cdot -\frac{3}{4}$$

$$+\frac{3}{24} = \boxed{\frac{1}{8}}$$

20. Simplify. $\left(-\frac{4}{5}\right)\left(-\frac{5}{4}\right) + \frac{20}{20} =$

$$\left(-\frac{4}{5}\right)\left(-\frac{5}{4}\right)$$

$$+ \frac{20}{20} = \boxed{1}$$