

Review for Rational Numbers Test...

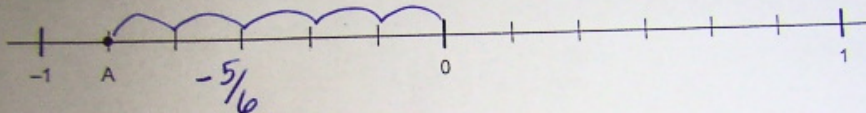
1. Which numbers are rational numbers?

$$-5.4, \frac{7}{6}, 11, -\frac{1}{4}$$

2. Identify the number that is NOT equal to the other three numbers.

$$\frac{-5}{8}, \frac{5}{-8}, \frac{-5}{-8}, -\frac{5}{8}$$

3. Which rational number is represented by the letter A on the number line?



4. Order the numbers from least to greatest.

$$-0.4, -0.\bar{4}, -0.44$$

5. Which of these numbers are between -2.4 and -3.9 ?

$$-4.05, -2.95, -3.95, -3.35$$

6. Which of these numbers are between $\frac{4}{6}$ and $\frac{7}{5}$?

$$\frac{5}{6}, \frac{1}{5}, \frac{7}{8}, \frac{4}{5}$$

7. Determine this sum.

$$(-2.5) + (-6.1)$$

8. Estimate to determine which sum is greater than 0.

i) $5.8 + (-7.7)$

ii) $-1.1 + (-1.8)$

iii) $-3.3 + 3.6$

iv) $-3.6 + 2.8$

9. Determine this sum.

$$\frac{14}{7} + \left(-\frac{15}{14} \right)$$

10. A student first borrowed \$40.25, then borrowed another \$15.75 from his father. He then paid back \$20.75. How much does he still owe his father?

11. Which expression has the least sum?

i) $9.43 + 6.05$

ii) $-9.43 + 6.05$

iii) $9.43 + (-6.05)$

iv) $-9.43 + (-6.05)$

12. Yesterday, the temperature of a freezer was -18°F . When the technician checked the freezer today temperature had decreased by 11°F . Determine the temperature of the freezer today.

13. Determine this difference.

$$\frac{18}{7} - \left(-\frac{5}{7}\right)$$

a. $\frac{23}{7}$

b. $-\frac{13}{7}$

c. $-\frac{23}{7}$

d. $\frac{13}{7}$

14. Which expression has the same answer as $-\frac{3}{4} - \left(-\frac{7}{8}\right)$?

i) $-\frac{3}{4} - \frac{7}{8}$

ii) $\frac{3}{4} + \frac{7}{8}$

iii) $-\frac{3}{4} + \frac{7}{8}$

iv) $\frac{3}{4} - \left(-\frac{7}{8}\right)$

a. ii

b. i

c. iv

d. iii

a. ii b. i c. iv d. iii

15. Determine this difference.

$$-\frac{3}{4} - \frac{7}{8}$$

16. The temperature at the top of a mountain is 10.5°C less than the temperature at the base of the mountain. If the temperature at the base is -4.4°C , what is the temperature at the top?

17. Determine this product.

$$\frac{4}{9} \times (-6)$$

18. Which products are less than 0?

- $(-0.6) \times (1.1)$
- $(-2.3) \times (-1.8)$
- $(-1.2) \times (-0.7)$
- $(1.5) \times (-1.8)$

19. Determine this product.

$$\left(-\frac{3}{2}\right)\left(-\frac{5}{4}\right)$$

22. $-\frac{10}{3} - \frac{13}{9}$

23. $\left(3\frac{1}{2}\right)\left(-3\frac{2}{3}\right)$

24. $\left(-\frac{4}{3}\right) \div \left(-\frac{5}{3}\right)$

25. $6.4 - 3.8 + 2.4$

26. $\frac{2}{3} - \left(-\frac{7}{12}\right)\left(-\frac{4}{21}\right)$

17. Determine this product.

$$\frac{4}{9} \times (-6)$$

18. Which products are less than 0?

- i) $(-0.6) \times (1.1)$
- ii) $(-2.3) \times (-1.8)$
- iii) $(-1.2) \times (-0.7)$
- iv) $(1.5) \times (-1.8)$

19. Determine this product.

$$\left(-\frac{3}{2}\right)\left(-\frac{5}{4}\right)$$

20. Determine this quotient.

$$(-2.8) \div 4$$

21. $-4\frac{3}{4} + \left(-1\frac{3}{5}\right)$

22. $-\frac{10}{3} - \frac{13}{9}$

23. $\left(3\frac{1}{2}\right)\left(-3\frac{2}{3}\right)$

24. $\left(-\frac{4}{3}\right) \div \left(-\frac{5}{3}\right)$

25. $6.4 - 3.8 + 2.4 \times 4.1$

26. $\frac{2}{3} - \left(-\frac{7}{12}\right)\left(-\frac{4}{21}\right)$

27. $\left[\frac{8}{9} \times \left(-\frac{5}{12}\right)\right] + \left(-\frac{4}{9}\right)$

28. $-2\frac{3}{4} - \left(-4\frac{1}{3}\right) - 2\frac{5}{6}$

1. All Rational Numbers.

2.

4. -0.4
 $-0.444\dots$
 -0.44

Least $-0.444\dots$
 -0.44
 -0.4

Greatest. "Closest to zero"

5. -2.4

-2.95
 -3.35
 -3.9
 -3.95
 -4.05

$$6. \quad \frac{4}{6}$$

$$\frac{7}{5}$$

$$0.\bar{6}$$

$$1.4$$

$$\frac{5}{6} = 0.8\bar{3} \quad \checkmark$$

$$\frac{1}{5} = 0.2 \quad \times$$

$$\frac{7}{8} = 0.875 \quad \checkmark$$

$$\frac{4}{5} = 0.8 \quad \checkmark$$

$$7. (-2.5) + (-6.1)$$

$$-8.6$$

$$8. 5.8 + (-7.7) = -$$

$$-1.1 + (-1.8) = -$$

$$-3.3 + 3.6 = +$$

$$-3.6 + 2.8 = -$$

$$9. \quad \frac{14}{7} + \left(-\frac{15}{14}\right)$$

$$\frac{28}{14} + \left(-\frac{15}{14}\right)$$

$$\frac{13}{14}$$

$$10. \quad -40.25 - 15.75 + 20.75$$

$$-35.25$$

$$11. \quad 9.43 + 6.05$$

$$-9.43 + 6.05$$

$$9.43 + -6.05$$

$$-9.43 + -6.05 = -15.48 \text{ (least)}$$

$$\begin{array}{r} 12. \quad -18.1 \\ \quad -11.2 \\ \hline \quad -29.3 \end{array}$$

$$13. \quad \frac{23}{7}$$

14.

$$15. \quad -\frac{3}{4} - \frac{7}{8}$$

$$-\frac{6}{8} - \frac{7}{8}$$

$$-\frac{13}{8}$$

$$16. \quad -4.4 - 10.5$$

$$-14.9$$

$$17. \quad \frac{4}{\frac{9}{3}} \times \frac{(-6)^{-2}}{1}$$

$$\frac{-8}{3}$$

18. i) - less than zero
ii) +
iii) +
iv) - less than zero.

19. $\left(-\frac{3}{2}\right)\left(-\frac{5}{4}\right)$
 $+\frac{15}{8}$

20. $(-2.8) \div 4$
 -0.7

$$21. -4\frac{3}{4} + -1\frac{3}{5}$$

$$- \frac{19}{4} + - \frac{8}{5}$$

$$- \frac{95}{20} + - \frac{32}{20}$$

$$- \frac{127}{20}$$

$$-6\frac{7}{20}$$

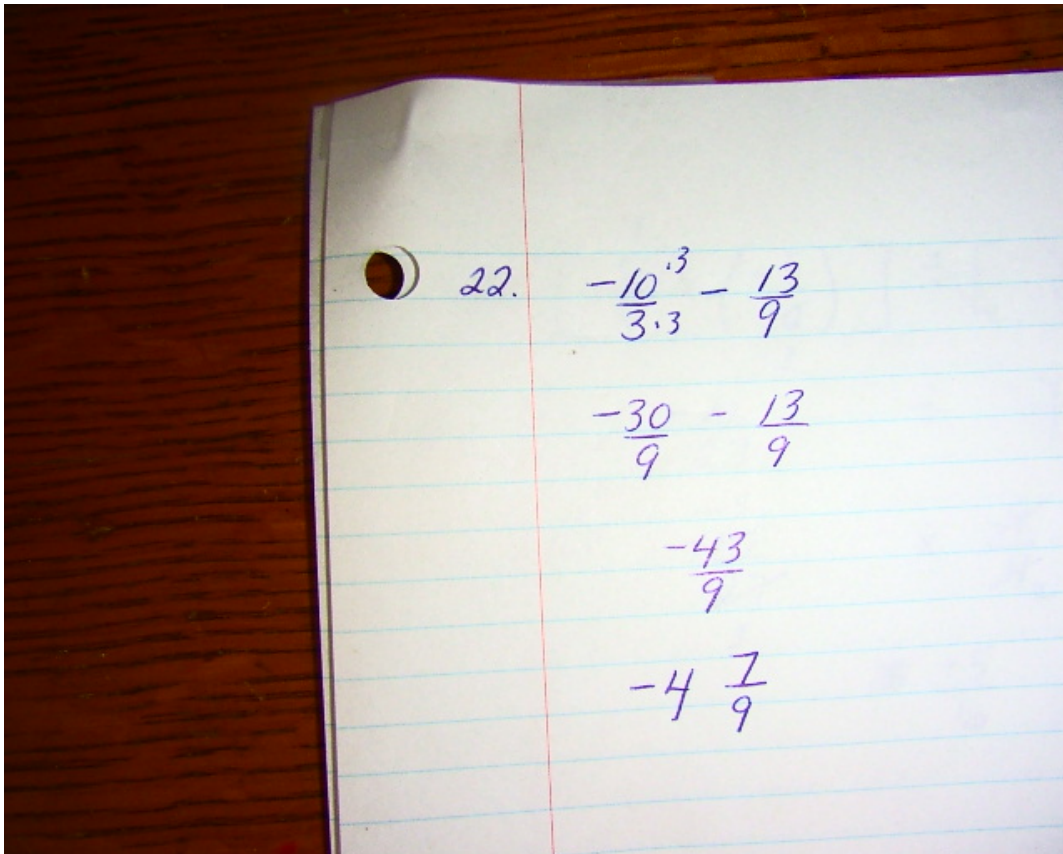
$$21. -4\frac{3}{4} + -1\frac{3}{5}$$

$$-\frac{19}{4} + -\frac{8}{5}$$

$$-\frac{95}{20} + -\frac{32}{20}$$

$$-\frac{127}{20}$$

$$-6\frac{7}{20}$$



22. $-\frac{10^3}{3 \cdot 3} - \frac{13}{9}$

$$-\frac{30}{9} - \frac{13}{9}$$
$$-\frac{43}{9}$$
$$-4 \frac{7}{9}$$

$$23 \quad \left(3 \frac{1}{2}\right) \left(-3 \frac{2}{3}\right)$$

$$\left(\frac{7}{2}\right) \left(-\frac{11}{3}\right)$$

$$\frac{-77}{6}$$

$$-12 \frac{5}{6}$$

$$24. \quad \left(-\frac{4}{3}\right) \div \left(-\frac{5}{3}\right)$$

$$-\frac{4}{3} \times \frac{3}{5}$$

$$\frac{4}{5}$$

$$\begin{array}{r} 25. \quad 6.4 - 3.8 \div 2.4 \times 4.1 \\ 6.4 - 1.58 \times 4.1 \\ 6.4 - 6.5 \\ -0.1 \end{array}$$

$$26. \quad \frac{2}{3} - \left(\frac{-7}{12} \right) \left(\frac{-4}{21} \right)$$

$$+\frac{2}{3} - \left(\frac{+1}{9} \right)$$

$$+\frac{6}{9} - \left(\frac{1}{9} \right)$$

$$+\frac{5}{9}$$

$$27. \left[\frac{\cancel{8}^2}{9} \times \left(\frac{-5}{\cancel{12}_3} \right) \right] \div \left[\frac{-4}{9} \right]$$

$$\frac{-10}{27}$$

$$\div \frac{-4}{9}$$

$$\begin{array}{r} -5 \\ -10 \\ \hline 27 \\ 3 \end{array}$$

$$\times \frac{\cancel{9}^{-1}}{4_2}$$

$$\text{Ans } \frac{+5}{6}$$

$$\begin{aligned} 28. & -2\frac{5}{4} - 4\frac{1}{3} - 2\frac{5}{6} \\ & -\frac{11 \cdot 3}{4 \cdot 3} - \frac{13 \cdot 4}{3 \cdot 4} - \frac{17 \cdot 2}{6 \cdot 2} \\ & -\frac{33}{12} - \frac{52}{12} - \frac{34}{12} \\ & \frac{19}{12} - \frac{34}{12} \\ & \frac{-15}{12} \\ & -1\frac{3}{12} \\ & -1\frac{1}{4} \end{aligned}$$