

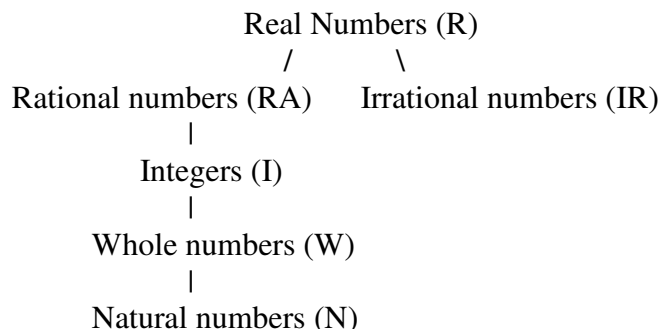
Name _____

PRINT THIS OUT AND COMPLETE WITH PENCIL.

Please complete the following problems WITHOUT the use of a calculator. Please do these questions without assistance as YOU will be the one who will eventually be assessed. I am hoping to spend very little time on these concepts as they should be things you readily know. We will go over any questions on the first day of school. The score you earn will be for completion only, not for right or wrong.

Goal 1.1

Understand the real number system



List all categories the number is part of (refer to the chart for category names & abbreviations).

1. -4 _____

2. $\frac{3}{5}$ _____

3. $24.14141414\dots$ _____

4. $\sqrt{7}$ _____

5. 217 _____

6. 8π _____

Answer each of the following as true or false.

7. Some fractions are irrational. _____

8. All natural numbers are rational. _____

9. All integers are whole numbers. _____

10. Every integer is negative. _____

11. Some whole numbers are natural. _____

12. Some decimals are rational. _____

Goal 1.2

Apply the order of operations

Simplify completely.

1. $(26 + 4) \div (30 \div 2)$ _____

2. $8 + 9 \cdot 2$ _____

3. $\frac{8 \cdot 5 + 2 \cdot 7}{2(7 - 4)}$ _____

4. $4 + 27 \div 9 - 1$ _____

5. $5 + (36 - 4) \div 8 \cdot 2$ _____

6. $\frac{(30 \div 10) + (14 + 3)}{13 - 4 \cdot 2}$ _____

Goal 1.3

Add, subtract, multiply and divide positive and negative numbers.

Simplify completely.

1. $\frac{1}{4}(-20)$ _____

2. $47 \cdot 2 \cdot 5$ _____

3. $|7| + |-6|$ _____

4. $49 \cdot 5 \cdot 2$ _____

5. $(-5 + 8) + 2$ _____

6. $-5 + (-7) + (-4)$ _____

7. $32 + [-(-4 + 2)]$ _____

8. $12 - (-18)$ _____

9. $23 - 36 + 3$ _____

10. $72 \div (-9)$ _____

11. $8 + 9 - 3 + (-7) - (-3)$ _____

12. $8.24 + 5.6 + 4.4 + 1.76$ _____

13. $12 \div \left(-\frac{1}{4}\right)$ _____

14. $(37)(12)(89)(0)$ _____

15. $\frac{4}{7} \cdot 2\frac{2}{3}$ _____

16. $-32 - 11$ _____

17. $\frac{1}{6}(-24)$ _____

18. $\frac{2}{3} + \frac{3}{4} - \frac{1}{6}$ _____

19. $\frac{84}{-4}$ _____

20. $(4)(-3)(5)$ _____

21. $\frac{5}{8} \div \frac{3}{4}$ _____

22. $-15 + 12$ _____

23. $15 - 72$ _____

24. $\frac{7}{4} - 5$ _____

25. $132.46 + 25.1$ _____

26. $-3.4 \cdot 5.21$ _____

Goal 1.4

Simplify variable expressions

Evaluate for $x = 3$, $y = 4$ and $z = 2$.

1. $5yz - 3x$ _____

2. $\frac{36-4z}{x+y}$ _____

Simplify completely.

3. $4(x + 2)$ _____

4. $(3x - 5)4$ _____

5. $9 + 3(x + 7)$ _____

6. $2(3x - 1) + 5(x + 4)$ _____

7. $7x\left(\frac{1}{x}\right)$ _____

8. $(-7x)(8y)$ _____

9. $(-x)(-4y)(-11z)$ _____

10. $-\frac{1}{6}(12x - 18y)$ _____

11. $4(3x - 2y) + [-3(x - 7) + 8(2x + 1) + 3x]$ _____