

MATH COMPETENCY PRACTICE TEST

ANSWERS

Perform the indicated operation:

1. $\frac{7}{10} \cdot \frac{15}{2} \cdot \frac{3}{14}$

2. $\frac{7}{15} + \frac{1}{18}$

3. $|\frac{1}{4}| \div 2\frac{2}{3}$

4. $10\frac{1}{4} - 5\frac{3}{5}$

5. 0.002×1.4

6. Divide 0.00578 by 1.7

Calculate and simplify:

7. $-3 - (-4) + 5$

8. $(-2)(-3) - (5)(-2)$

9. $2\frac{1}{4} - |\frac{1}{3}| - 2\frac{1}{5}$

10. $\frac{x^4 \cdot x^5}{x \cdot x^2}$

11. $2x - (-x - y) - y$

12. Evaluate $b^2 - 4ac$
when $a = -3$
 $b = -2$
 $c = 3$

Solve:

13. $-2t + 1 = -5$

14. $22 = \frac{3x}{4} - 2$

15. $4(d - 1) = 3(d + 1)$

16. $(4x + 2)(5x + 7)$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. A 200-foot piece of rope is to be cut into four pieces such that the first two pieces are the same length, the third piece is twice the first piece, and the fourth piece is three times the third piece. How long is each piece of rope?
18. Joe and Dave had a roofing business. Joe, as owner of the materials, received 3 dollars for every 2 dollars Dave received. On a job that paid \$750, what amount did each receive?
19. Multiply $x^2 - 2x - 3$ by $x + 2$

Proportions:

20. $\frac{8}{3} = \frac{24}{x}$

21. On a map of the United States, 2 inches represent 650 miles. How many inches of map distance represent 1,625 miles?

Solve these Inequalities:

22. $-2a > 12$ 23. $s - 8 \leq 6$ 24. $9m + 7 > 43$

Factor:

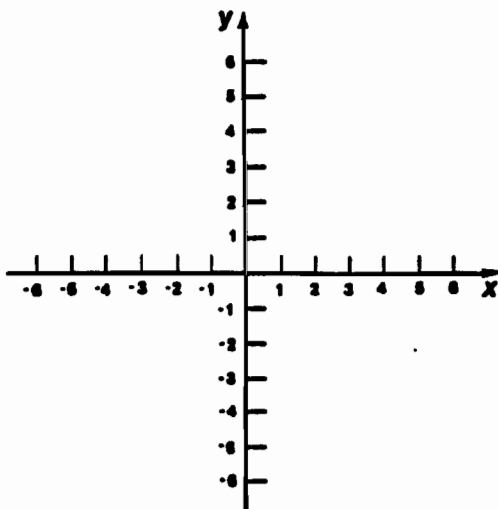
25. $2t^2 - 32$ 26. $6x^2 - 7x - 3$ 27. $5x^3 - 125x$

28. Solve the equation: $x^2 - 9 = 0$

Graph:

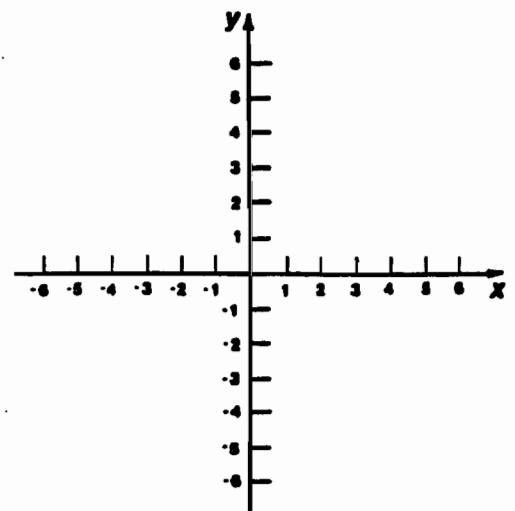
29. $y = -2x + 4$

X	Y
+1	
+3	
+4	



30. $2y = 4x - 6$

X	Y
+1	
+2	
+3	

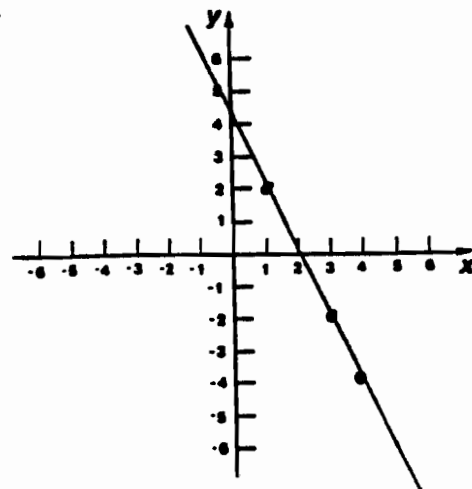


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1. $\frac{9}{8}$
2. $\frac{47}{90}$
3. $\frac{15}{32}$
4. $4\frac{13}{20}$
5. 0.0028
6. .0034
7. 6
8. 16
9. $-\frac{77}{60}$
10. $\frac{x^9}{x^3}$ OR x^6
11. $3x$
12. 40
13. 3
14. 32
15. $d = 7$
16. $20x^2 + 38x + 14$
17. 20, 20, 40, 120
18. Joe = \$450, Dave = \$300
19. $x^3 - 7x - 6$
20. $x = 9$
21. 5 inches

22. $a < -6$
23. $s \leq 14$
24. $m > 4$
25. 2, $(t - 4)$, $(t + 4)$
26. $(3x + 1)$, $(2x - 3)$
27. $5x$, $(x + 5)$, $(x - 5)$
28. $x = 3, -3$

29.



30.

