

Remedial Mathematics Knowledge Evaluation

Beginning of semester

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You cannot use a calculator!

1. Evaluate:

(a) $-10 + 12$

(b) $-9 - (-2)$

(c) $12 \div (-3)$

(d) -3^4

(e) $(-3) \times (-9)$

(f) $(-3)^2$

(g) $\sqrt{81}$

(h) $-\sqrt{\frac{100}{121}}$

2. Evaluate:

(a) $\frac{2}{3} + \frac{4}{7}$

(b) $\frac{5}{6} - \frac{3}{9}$

(c) $\frac{5}{6} \div \frac{3}{9}$

(d) $3\frac{1}{2} - 1\frac{1}{3}$

(e) $\frac{12}{23} \times \frac{69}{36}$

3. Reduce to lowest terms $\frac{168}{231}$

4. Change $\frac{23}{5}$ to a mixed number

5. Change $5\frac{1}{7}$ to improper fraction

6. Change $\frac{5}{7}$ to a decimal, rounded off to the nearest hundredths.

7. Change 2.25% to a fraction, reduced to lowest terms

8. Express .23 as a percent.

9. Evaluate:

(a) $10 - 3(12 \div 3 \cdot 2 - 7)$

(b) $8 - 2(3 \times 4 - 9 \div 3 \times 2)$

(c) $\sqrt{9} - 2^3 + 2(7 - 9)$

10. Evaluate the expressions below for $a = -1$, $b = 3$, and $c = -5$:

(a) $(a - b)^2 - 3c$

(b) $\frac{a + 2b - c}{a + c}$

11. Solve for x

(a) $x - 9 = 10$

(b) $3 - 2x = 11$

(c) $7(-5x - 7) - 2x + 6 = -30x - 41$

12. Solve literal equation $5x - 9y = 23$ for y

13. Solve linear inequality $3 - 3(2 + x) \leq 3x + 45$

14. Translate each English statement into an algebraic equation. Let x represent the number in each case.

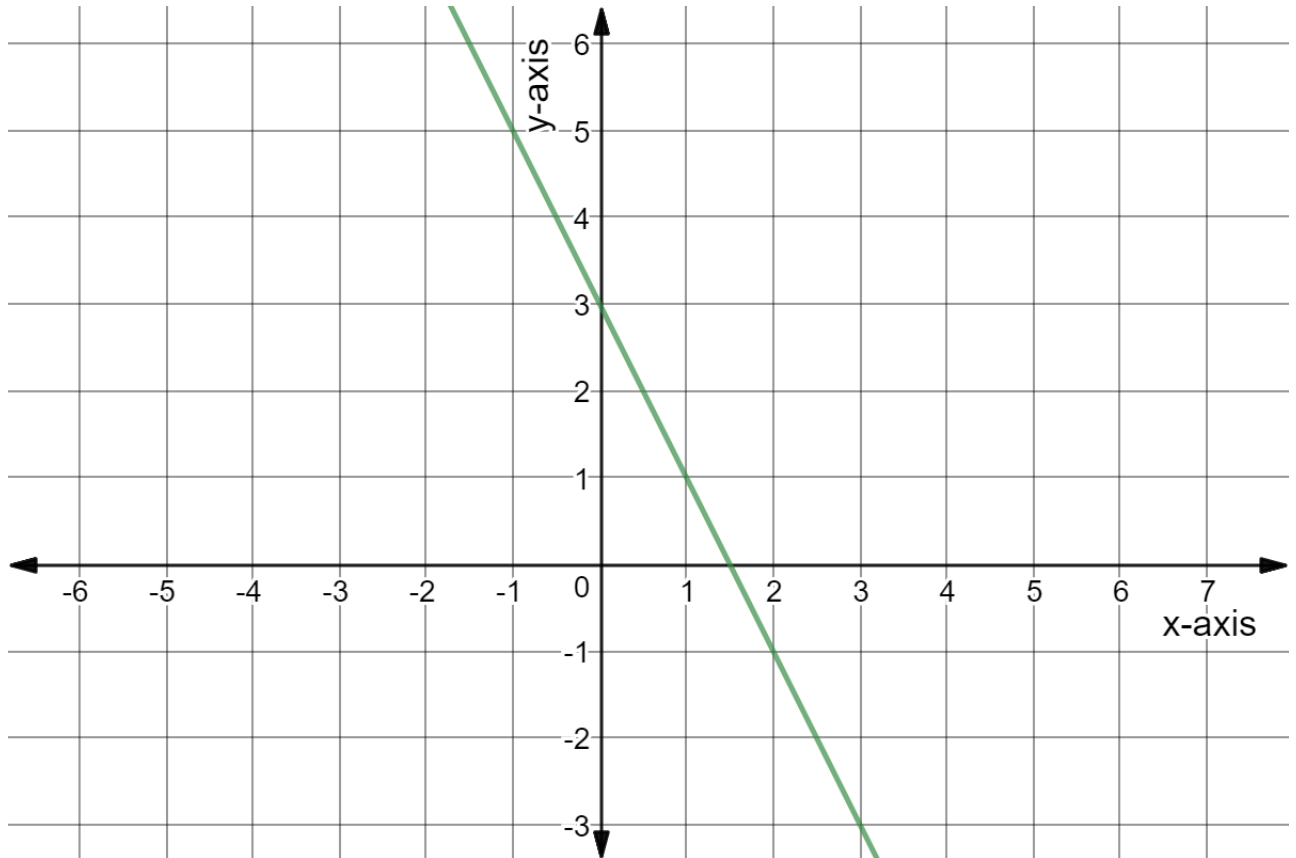
(a) 5 times the product of m and n .

(b) 3 more than the product of 17 and x .

(c) the product of 6 more than a number and 6 less than the same number.

15. Find the slope of the line passing through the points $(2, -6)$ and $(-5, -2)$

16. Find the slope of the line using the graph:



Answer: slope $m =$

17. Find the slope of the straight line with equation $2x + 3y = 12$