

Exam #1 a w

Name _____

math 0320 Exam #1 0404700aafm032024350m1aw

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SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Factor the binomial completely.

1) $81x^2 - 49$

1) _____

m50-1

Solve the equation.

2) $(2x + 1)(5x - 3) = 0$

2) _____

m50-2

3) $x^2 + 2x - 80 = 0$

3) _____

m50-3

4) $x^2 - 7x - 18 = 0$

4) _____

m50-4

5) $x^2 - x = 72$

5) _____

m50-5
6) $x^2 + 3x = 28$

6) _____

m50-6
7) $2x^2 - 7x - 9 = 0$

7) _____

m50-7
8) $15x^2 - 8x = 0$

8) _____

m50-8
9) $9x^2 - 16 = 0$

9) _____

m50-9

10) $3x^2 + 21x + 36 = 0$

10) _____

m50-10

11) $15x^2 + 31x + 1 = -9$

11) _____

m50-11

12) $10x^3 + 70x^2 + 120x = 0$

12) _____

m50-12

13) $y^3 + 6y^2 + 9y = 0$

13) _____

m50-13

14) $(3x + 2)(9x^2 + 12x + 4) = 0$

14) _____

m50-14

15) $9x^3 - 16x = 0$

15) _____

m50-15

16) $25x^3 - 30x^2 + 8x = 0$

16) _____

m50-16

Find the product and simplify.

17) $\frac{2y}{4y+2} \cdot \frac{10y+5}{7}$

17) _____

m50-17

Find the quotient and simplify.

18) $\frac{x^2 - y^2}{x + y} \div \frac{x}{x^2 - xy}$

18) _____

m50-18

Perform the indicated operation. Simplify if possible.

19) $\frac{x^2 - 8x}{x - 6} + \frac{12}{x - 6}$

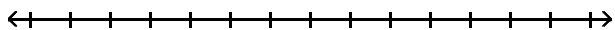
19) _____

m50-19

Solve the compound inequality. Graph the solution set.

20) $13 \leq 4t + 5 \leq 29$

20) _____



m50-20

Solve the absolute value equation.

21) $|x + 3| = 6$

21) _____

m50-21

Solve the inequality. Graph the solution set.

22) $|x + 18| < 9$

22) _____

m50-22

23) $|x + 3| > 4$

23) _____

m50-23

Find the square root. Assume that all variables represent positive real numbers.

24) $\sqrt{16x^{10}}$

24) _____

m50-24

Evaluate.

25) If $f(x) = \sqrt{2x + 7}$, find the value of $f(37)$.

25) _____

m50-25

Answer Key

Testname: AAFM032024350MT1AW

1) $(9x + 7)(9x - 7)$

2) $-\frac{1}{2}, \frac{3}{5}$

3) $-10, 8$

4) $9, -2$

5) $-8, 9$

6) $-7, 4$

7) $\frac{9}{2}, -1$

8) $\frac{8}{15}, 0$

9) $\frac{4}{3}, -\frac{4}{3}$

10) $-4, -3$

11) $-\frac{5}{3}, -\frac{2}{5}$

12) $0, -3, -4$

13) $0, -3$

14) $-\frac{2}{3}$

15) $\frac{4}{3}, -\frac{4}{3}, 0$

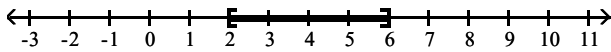
16) $\frac{4}{5}, \frac{2}{5}, 0$

17) $\frac{5y}{7}$

18) $(x - y)^2$

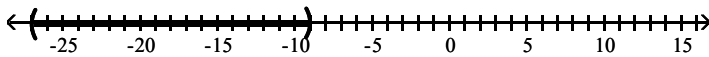
19) $x - 2$

20) $[2, 6]$

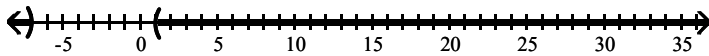


21) $-9, 3$

22) $(-27, -9)$



23) $(-\infty, -7) \cup (1, \infty)$



24) $4x^5$

25) 9