

FOIL
combine like terms

Operations with Polynomials

FACTOR

Difference of Squares

p and q

Probability

$P(A \text{ and } B) = P(A) \cdot P(B)$

$P(A|B) = \frac{P(A \text{ and } B)}{P(B)}$

$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$

1 Factor the polynomials.

$$2x^2 + 9x - 5$$

$$16x^2 - 25$$

No Calculator Problem!!!!

2 Kylie has a collection of bows for her hair. She has two different sizes, small and large. All the bows are either solid or have a pattern.

	Small	Large
Pattern	8	6
Solid	7	7

What is the probability that a randomly selected bow is large and has a pattern?

No Calculator Problem!!!!

3 Given:

$$(x^2 - y^2) = (x + y)(x - y)$$

Select the choice from each box that correctly completes the sentence.

To determine the value of $(52)(48)$ using the given equation, let x equal

- ☐ 56
- ☐ 52
- ☐ 50
- ☐ 48

and y equal

- ☐ 1
- ☐ 2
- ☐ 4
- ☐ 8

No Calculator Problem!!!!

- 4 A survey asked 410 students whether they would eat food served in the school cafeteria. The results are recorded in the table shown.

Grade	Yes	No
9th	67	33
10th	63	47
11th	32	68
12th	12	88

What is the probability that a student will **not** eat food served in the cafeteria, given that the student is in 10th grade?

- 5 Multiply the following polynomials.

$$(x - 7)(3x^2 + 8)$$

No Calculator Problem!!!!

Simplify the expression $(3x^4 + 9x^3 - 7x + 15) + (-6x^4 - 8x^2 + 5x - 3)$.

- 6 A bag contains 60 marbles. Eighteen of the marbles are clear, the rest are opaque. Half of the marbles are cracked.

Part A) If you select one marble at random, what is the probability it is clear or cracked?

Part B) If you select two marbles at random, what is the probability that both are opaque?

- 7 Fannie is making a rectangular blanket. The length of the blanket is 10 inches greater than its width, w , in inches.

No Calculator Problem!!!! Write the function, $f(w)$, that describes the area, in square inches, of Fannie's blanket as a function of the width, w .