

QUADRATICS CHAPTER REVIEW (F2017)

① WHAT IS THE DEGREE OF $f(x) = 3x^3 + 2x^2 + x - 1$?

② CLASSIFY $3x^2 - 9$ BY THE NUMBER OF TERMS.

③ CLASSIFY $8x^2 + 2x - 1$ BY THE DEGREE.

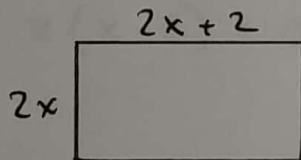
④ SIMPLIFY:

Ⓐ $(2x^2 + 6x + 4) + (5x^2 + 7) =$

Ⓑ $(x^2 - 3x) - (2x^2 + 5x) =$

Ⓒ $3x^2(2x^3 + 5x - 5) =$

Ⓓ FIND THE AREA OF THE RECTANGLE SHOWN BELOW



Ⓔ $(x - 2)(3x + 4) =$

Ⓕ $(3x - 5)(2x^2 + 7x - 8) =$

5) FACTOR OUT THE GCF !

(A) $15x - 3y =$

(B) $21x^2 - 7x + 14 =$

(C) $2x^2 + 4x =$

6) FACTOR BY GROUPING !

(A) $4qr + 8r + 3q + 6$

(B) $12a^2 - 15ab - 16a + 20b$

7) SOLVE:

(A) $x(x-8) = 0$

(B) $y^2 + 3y = 0$

(C) $x^2 = 10x$

8) FACTOR:

(A) $x^2 + 9x + 20 =$

(B) $x^2 + 13x - 48 =$

(C) $x^2 - 3x - 10 =$

9) SOLVE:

(A) $x^2 + 9x + 20 = 0$

(B) $x^2 - 3x = 48$

(C) $x^2 - 3x = 10$

10) FACTOR:

(A) $2x^2 + 5x + 3$

(B) $3x^2 + 15x + 18$

10 (CONTINUED)

C) $2x^2 - 3x - 9$

D) $2x^2 + 3x + 6$

E) $16h^2 - 9a^2$

F) $27g^3 - 3g$

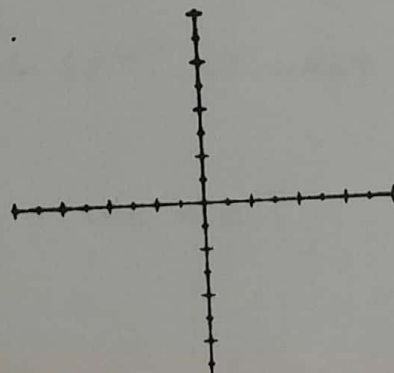
11 DOES THE GRAPH OF $f(x) = x^2 - 4x + 2$ OPEN UP OR DOWN?

12 WHAT IS THE Y-INTERCEPT OF THE GRAPH OF $f(x) = x^2 - 4x + 2$?

13 WHAT IS THE EQUATION OF THE AXIS OF SYMMETRY OF THE GRAPH OF $f(x) = x^2 - 4x + 2$?

14 WHAT ARE THE COORDINATES OF THE VERTEX OF THE GRAPH OF $f(x) = x^2 - 4x + 2$?

15 GRAPH $f(x) = x^2 - 4x + 2$. LABEL THE VERTEX, Y-INTERCEPT, AND AXIS OF SYMMETRY.



16 WHAT ARE THE DOMAIN AND RANGE OF $f(x) = x^2 - 4x + 2$?

D: R:

4

(17) USE A GRAPHING CALCULATOR TO FIND THE COORDINATES OF THE VERTEX OF $g(x) = -3x^2 + 14x - 8$. (ROUND TO 10TH'S)

(18) USE A GRAPHING CALCULATOR TO FIND THE ZEROS OF $g(x) = -3x^2 + 14x - 8$. (ROUND TO 10TH'S)

(19) SOLVE USING A GRAPHING CALCULATOR (ROUND TO 10TH'S):

(A) $x^2 - 6x + 3 = 0$

(B) $4x^2 - 4x + 1 = 0$

(C) $x^2 + 2 = 0$

(20) A FOOTBALL IS KICKED UP FROM GROUND LEVEL AT AN INITIAL UPWARD VELOCITY OF 40 FEET PER SECOND. THE EQUATION $y = -16x^2 + 40x$ GIVES THE HEIGHT, y , IN FEET AFTER x SECONDS.

(A) HOW HIGH IS THE BALL AT 1 SECOND?

(B) WHEN IS THE BALL 20 FEET HIGH?

(C) HOW HIGH DOES THE BALL GET? AT WHAT TIME?

(D) HOW LONG IS THE BALL IN THE AIR?