1: Multiply: (xy+7)(xy–4)

2: Express using positive exponents $\left(\dfrac{a}{2}\right)^{-5}$

3: Divide(leave answer in scientific notation) $\dfrac{8.5 \times 10^{-3}}{2.5 \times 10^{5}}$

4: Factor completely: $x^2 + 7x + 6$

5: Factor completely: $x^2 - 11x + 30$

6: Factor completely: $x^2 + x - 42$

7: Factor completely: $X^2 - \dfrac{2}{5}X + \dfrac{1}{25}$

8: Factor completely: $3x^2 + x - 4$

9: Factor by grouping: $x^2 + 5x - 2x - 10$

10 Factor completely $5x^2 - 30x + 45$

11: Factor $x(x-2) + 7(x-2)$

12: Factor $x^2 + 14x + 49$

13: Factor $x^2 + 49$

14: Solve this quadratic equation; $x^2 + 9x + 14 = 0$

15: Solve this quadratic equation; $x^2 + 9x - 14 = 0$

16:     Solve this quadratic equation; $(x+5)(x+7) = 0$

17:     Solve this quadratic equation; $x^2 - 6x = 0$

18:     Solve this quadratic equation; $81x^2 - 5 = 20$

19: For what value of x is this expression undefined? $\dfrac{x^2 - 9}{4x - 12}$

20: Perform the indicated operation: $\dfrac{a+1}{a-3} \div \dfrac{a-1}{a+3}$

21:    Solve for x: $\dfrac{1}{5} + \dfrac{5}{3}x = 3$

22: Evaluate $25 \div 5^2 x(x-1)$, for $x = 3$

23: Evaluate n^0 when $n = -18$

24: What number is 32% of 230?

25: A rectangle is three times as wide as it is high. If the perimeter is 16" what are the actual dimensions of the rectangle?

26: Multiply and simplify: $\dfrac{x^2 - 9}{x^2} \cdot \dfrac{7x}{x^2 + x - 12}$

27: Simplify if possible $\dfrac{50x^2 y}{40xy}$

28.

Solve this quadratic equation by graphing: $X^2 - 3X - 6 = 0$

Note: There are no integer solutions to this quadratic so it MUST be solved by graphing and you will arrive only at approximate answers.