Taking out a common factor — Two and three terms

Name: _____ Date: _____

Take out the greatest common factor. Fill in every number.

1. $68x^2 + 136x + 85 = \_\_\_(\_\_\_x^2 + \_\_\_x + \_\_\_)$

2. $28x^2 + 77x + 14 = \_\_\_(\_\_\_x^2 + \_\_\_x + \_\_\_)$

3. $105x + 75 = \_\_\_(\_\_\_x + \_\_\_)$

4. $120x^2 + 216x + 216 = \_\_\_(\_\_\_x^2 + \_\_\_x + \_\_\_)$

5. $126x + 140 = \_\_\_(\_\_\_x + \_\_\_)$

6. $42x + 154 = \_\_\_(\_\_\_x + \_\_\_)$

7. $10x + 45 = \_\_\_(\_\_\_x + \_\_\_)$

8. $8x^2 + 40x + 4 = \_\_\_(\_\_\_x^2 + \_\_\_x + \_\_\_)$

9. $132x + 48 = \_\_\_(\_\_\_x + \_\_\_)$

10. $57x^2 + 133x + 19 = \_\_\_(\_\_\_x^2 + \_\_\_x + \_\_\_)$

Taking out a common factor · Two and three terms — Answer key

1. $68x^2 + 136x + 85 = 17(4x^2 + 8x + 5)$ ($68 \div 17 = 4$, $136 \div 17 = 8$, $85 \div 17 = 5$)

2. $28x^2 + 77x + 14 = 7(4x^2 + 11x + 2)$ ($28 \div 7 = 4$, $77 \div 7 = 11$, $14 \div 7 = 2$)

3. $105x + 75 = 15(7x + 5)$ ($105 \div 15 = 7$, $75 \div 15 = 5$)

4. $120x^2 + 216x + 216 = 24(5x^2 + 9x + 9)$ ($120 \div 24 = 5$, $216 \div 24 = 9$, $216 \div 24 = 9$)

5. $126x + 140 = 14(9x + 10)$ ($126 \div 14 = 9$, $140 \div 14 = 10$)

6. $42x + 154 = 14(3x + 11)$ ($42 \div 14 = 3$, $154 \div 14 = 11$)

7. $10x + 45 = 5(2x + 9)$ ($10 \div 5 = 2$, $45 \div 5 = 9$)

8. $8x^2 + 40x + 4 = 4(2x^2 + 10x + 1)$ ($8 \div 4 = 2$, $40 \div 4 = 10$, $4 \div 4 = 1$)

9. $132x + 48 = 12(11x + 4)$ ($132 \div 12 = 11$, $48 \div 12 = 4$)

10. $57x^2 + 133x + 19 = 19(3x^2 + 7x + 1)$ ($57 \div 19 = 3$, $133 \div 19 = 7$, $19 \div 19 = 1$)