

Answers to

$$1) \begin{bmatrix} 1 & 5 \\ 6 & 4 \\ 4 & -3 \end{bmatrix}$$

$$2) \begin{bmatrix} -6 \\ 6 \end{bmatrix}$$

$$3) \begin{bmatrix} 8 & -4 & 5 \\ -6 & 11 & -2 \end{bmatrix}$$

$$4) \begin{bmatrix} -6 \\ 4 \end{bmatrix}$$

$$5) \begin{bmatrix} -14 & -7 \\ 16 & -2 \\ -6 & 27 \end{bmatrix}$$

$$6) \begin{bmatrix} 15 & 18 \\ 5 & 8 \\ -30 & -6 \\ -30 & -6 \end{bmatrix}$$

$$7) \begin{bmatrix} -1 & 5 \\ 2 & 0 \end{bmatrix}$$

$$8) \begin{bmatrix} -2 & 22 \\ -13 & -17 \end{bmatrix}$$

9) Undefined

$$10) \begin{bmatrix} 25 & -31 \\ 38 & -29 \\ 47 & -15 \end{bmatrix}$$

11) Undefined

$$12) \begin{bmatrix} 15 & -20 \\ 30 & -10 \\ -7 & -14 \end{bmatrix}$$

$$13) \begin{bmatrix} -50 & 0 & 10 & 5 \end{bmatrix}$$

$$14) \begin{bmatrix} 56 & 28 & 35 \\ -80 & -40 & -50 \end{bmatrix}$$

$$15) \begin{bmatrix} -7 & 6 \end{bmatrix}$$

$$16) \begin{bmatrix} -18 & 3 \\ -10 & -25 \\ -6 & 31 \end{bmatrix}$$

$$17) \begin{bmatrix} -\frac{7}{31} & \frac{3}{31} \\ \frac{8}{31} & \frac{1}{31} \end{bmatrix}$$

$$18) \begin{bmatrix} \frac{4}{77} & -\frac{3}{77} \\ -\frac{1}{7} & -\frac{1}{7} \end{bmatrix}$$

$$19) \begin{bmatrix} \frac{6}{7} & \frac{11}{7} \\ -\frac{1}{7} & -\frac{3}{7} \end{bmatrix}$$

20) No inverse exists

$$21) \begin{bmatrix} \frac{4}{17} & -\frac{7}{34} \\ -\frac{3}{17} & \frac{1}{34} \end{bmatrix}$$

$$22) \begin{bmatrix} -\frac{4}{45} & \frac{7}{45} \\ \frac{1}{15} & \frac{2}{15} \end{bmatrix}$$

$$23) \begin{bmatrix} \frac{3}{5} & 1 & \frac{7}{5} \\ \frac{12}{5} & 5 & \frac{28}{5} \\ -\frac{7}{5} & -3 & -\frac{18}{5} \end{bmatrix}$$

$$24) \begin{bmatrix} -\frac{15}{4} & -\frac{1}{4} & \frac{5}{2} \\ -2 & 0 & 1 \\ -\frac{5}{2} & -\frac{1}{2} & 2 \end{bmatrix}$$

25) No inverse exists

$$26) \begin{bmatrix} 1 & -\frac{1}{2} & 3 \\ -1 & \frac{1}{4} & -\frac{5}{2} \\ 0 & \frac{1}{2} & 0 \end{bmatrix}$$

$$27) \begin{bmatrix} -\frac{7}{2} & 1 & \frac{13}{2} \\ -\frac{11}{2} & 2 & \frac{21}{2} \\ \frac{17}{2} & -3 & -\frac{33}{2} \end{bmatrix}$$

$$28) \begin{bmatrix} \frac{7}{6} & -\frac{1}{6} & -\frac{1}{2} \\ -\frac{2}{3} & -\frac{1}{3} & 0 \\ -\frac{4}{3} & \frac{1}{3} & 1 \end{bmatrix}$$

29) -2

30) 8

31) 0

32) -14

33) -77

34) -66

35) -18

36) 25

37) 109

38) -118

39) 307

40) 22

41) 9

42) -31

43) Yes

44) Yes

45) No

46) No

$$47) -\frac{1}{76} \cdot \begin{bmatrix} 2 & -9 \\ -10 & 7 \end{bmatrix}$$

$$48) \frac{1}{40} \cdot \begin{bmatrix} -1 & 4 \\ -10 & 0 \end{bmatrix}$$

$$49) -\frac{1}{32} \cdot \begin{bmatrix} -10 & 4 \\ 8 & 0 \end{bmatrix}$$

$$50) -\frac{1}{16} \cdot \begin{bmatrix} 5 & -3 \\ 8 & -8 \end{bmatrix}$$

$$51) -\frac{1}{8} \cdot \begin{bmatrix} 8 & -8 & 0 \\ -8 & 12 & 4 \\ -8 & 11 & 5 \end{bmatrix}$$

$$52) -\frac{1}{7} \cdot \begin{bmatrix} -10 & 6 & 23 \\ 6 & -5 & -11 \\ -11 & 8 & 26 \end{bmatrix}$$

$$53) -\frac{1}{10} \cdot \begin{bmatrix} 8 & -2 & 0 \\ 16 & -9 & 5 \\ 6 & -4 & 0 \end{bmatrix}$$

$$54) -\frac{1}{9} \cdot \begin{bmatrix} -3 & 3 & -3 \\ -4 & 16 & -13 \\ 5 & -20 & 14 \end{bmatrix}$$

$$55) \left(\frac{24}{5}, \frac{11}{5} \right)$$

$$56) \left(-20, \frac{23}{2} \right)$$

$$57) \left(\frac{13}{8}, -\frac{5}{8} \right)$$

$$58) \left(\frac{5}{2}, -5 \right)$$

$$59) (8, 6, -5)$$

$$60) (6, 0, 6)$$

$$61) (3, -4, 4)$$

$$62) (0, -1, -1)$$

$$63) (9, -6, 9)$$

$$64) \left(-2, -3, \frac{3}{2} \right)$$

$$65) \left(\frac{9}{2}, \frac{23}{6}, \frac{7}{2} \right)$$

$$66) \left(0, -\frac{19}{3}, -5 \right)$$

$$67) \left(-2, -\frac{29}{13}, -\frac{5}{13} \right)$$

$$68) (1, 5, 5)$$

$$69) (4, 1, 0)$$

$$70) \left(\frac{3}{7}, \frac{3}{7}, \frac{13}{7} \right)$$

$$71) \begin{bmatrix} -11 & -5 \end{bmatrix}$$

$$72) \begin{bmatrix} -7 & 0 \\ -11 & 0 \end{bmatrix}$$

73) No unique solution

$$74) \begin{bmatrix} 9 \\ -2 \end{bmatrix}$$

$$75) \begin{bmatrix} -8 & -2 \\ 10 & 4 \end{bmatrix}$$

$$76) \begin{bmatrix} 6 \\ 1 \end{bmatrix}$$

$$77) \begin{bmatrix} 10 \\ -6 \end{bmatrix}$$

$$78) \begin{bmatrix} 7 \\ -6 \end{bmatrix}$$

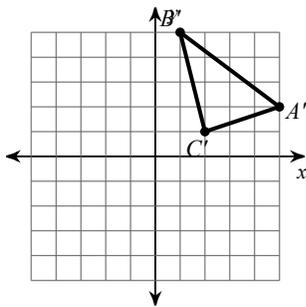
$$79) \begin{bmatrix} 3 \\ -2 \end{bmatrix}$$

$$80) \begin{bmatrix} -7 \\ -1 \end{bmatrix}$$

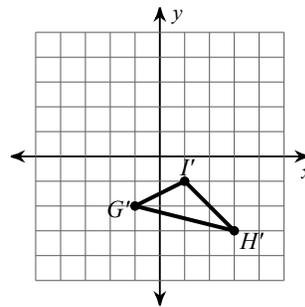
81) No unique solution

$$82) \begin{bmatrix} 2 & -2 \\ 6 & -9 \end{bmatrix}$$

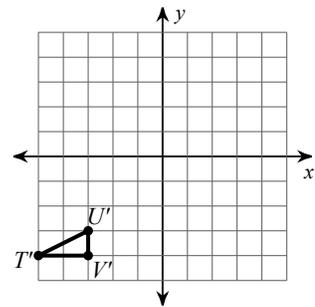
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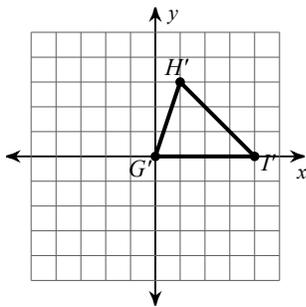
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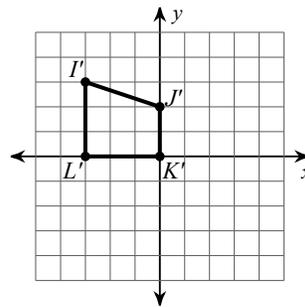
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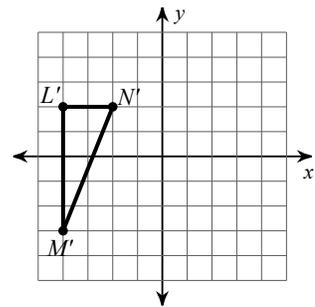
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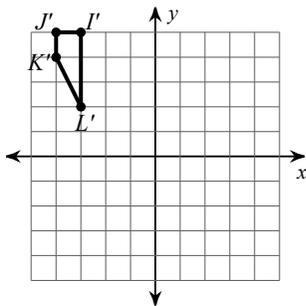
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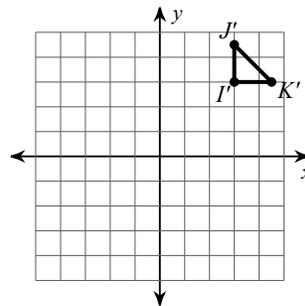
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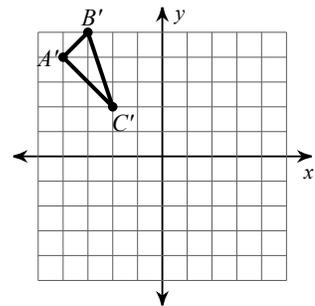
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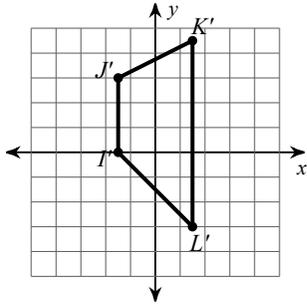
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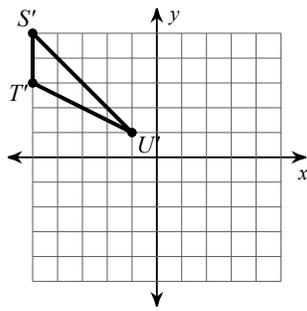
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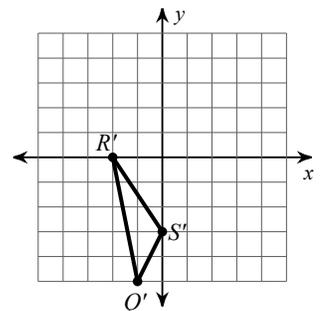
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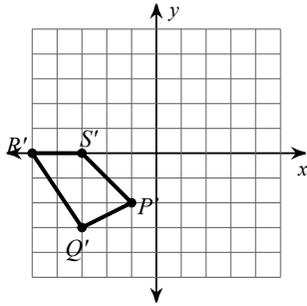
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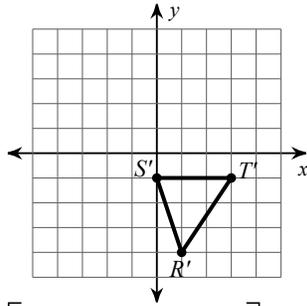
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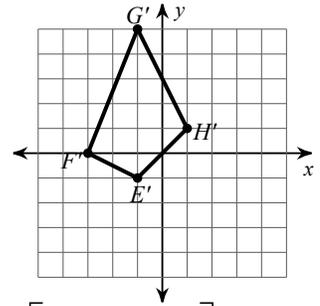
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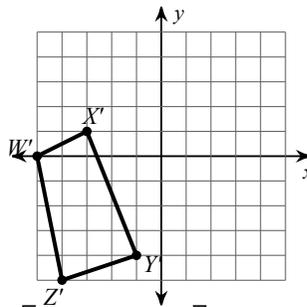
96)



97)



98)



99) $\begin{bmatrix} -5 & -5 & -3 & 0 \\ 3 & 5 & 5 & 4 \end{bmatrix}$

100) $\begin{bmatrix} -2 & 1 & -2 \\ 1 & 3 & -1 \end{bmatrix}$

101) $\begin{bmatrix} 0 & 0 & 3 \\ -2 & 0 & -1 \end{bmatrix}$

102) $\begin{bmatrix} -4 & 1 & -3 \\ -1 & 0 & -3 \end{bmatrix}$

103) $\begin{bmatrix} -1.25 & -0.5 & -0.5 \\ 0 & 0.25 & -0.75 \end{bmatrix}$

104) $\begin{bmatrix} -5 & 0 & 5 \\ -5 & 5 & -2.5 \end{bmatrix}$

105) $\begin{bmatrix} -3 & 3 & 3 \\ -1.5 & 1.5 & -1.5 \end{bmatrix}$

106) $\begin{bmatrix} -2.5 & 2.5 & 0 \\ 2.5 & 5 & -2.5 \end{bmatrix}$

107) $\begin{bmatrix} 5 & 2 & 3 \\ 4 & 5 & 2 \end{bmatrix}$

108) $\begin{bmatrix} -4 & -1 & 0 & -1 \\ 0 & 0 & 3 & 4 \end{bmatrix}$

109) $\begin{bmatrix} 0 & -4 & -4 & -1 \\ 0 & -1 & -2 & -4 \end{bmatrix}$

110) $\begin{bmatrix} -5 & -2 & -3 \\ 1 & -1 & 4 \end{bmatrix}$

111) $\begin{bmatrix} -3 & -4 & 1 \\ 5 & 1 & 2 \end{bmatrix}$

112) $\begin{bmatrix} 1 & 4 & 4 & 2 \\ 2 & 2 & 3 & 4 \end{bmatrix}$ 113) $\begin{bmatrix} -1 & 2 & 4 \\ 1 & -3 & -1 \end{bmatrix}$

114) $\begin{bmatrix} -5 & -1 & -3 \\ -1 & 2 & 4 \end{bmatrix}$

115) $\begin{bmatrix} -4 & -2 & -3 & -5 \\ 0 & 1 & -4 & -1 \end{bmatrix}$

116) $\begin{bmatrix} 0 & -3 & 0 & 4 \\ -1 & 0 & 3 & 0 \end{bmatrix}$

117) $\begin{bmatrix} -4 & 0 & -4 \\ 0 & -2 & -3 \end{bmatrix}$

118) $\begin{bmatrix} 3 & 0 & 3 & 4 \\ -3 & -1 & 1 & -3 \end{bmatrix}$

119) $\begin{bmatrix} 4 & 4 & 1 & 1 \\ 4 & 3 & 3 & 5 \end{bmatrix}$

120) $\begin{bmatrix} 2 & 3 & 2 & 0 \\ 5 & 5 & 1 & 2 \end{bmatrix}$

121) $\begin{bmatrix} 3 & 0 & 1 \\ 1 & 2 & 4 \end{bmatrix}$

122) $\begin{bmatrix} -1 & -4 & -4 & 1 \\ 0 & 1 & 3 & 4 \end{bmatrix}$