

Trimester Review**Solve each equation.**

1) $v - 36 = -3(1 - 4v)$

2) $-2(1 - 5x) = -30 + 6x$

3) $-5 - 5(b - 4) = 4b + 15$

Solve the system of equations. Your answer should be a coordinate (x, y).

4) $y = 6 - x$
 $-3x + y = 2$

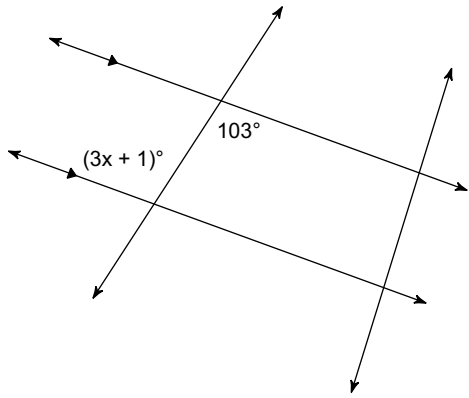
5) $6x + 6y = 0$
 $y = -6x$

6) $6x - 8y = 22$
 $y = -6x - 23$

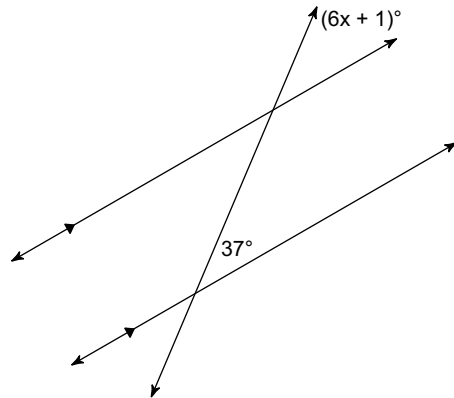
7) $2x - 2y = -18$
 $y = -7x - 15$

Find the value of x . Name any angle relationships that were used.

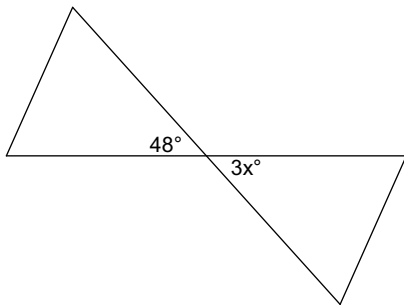
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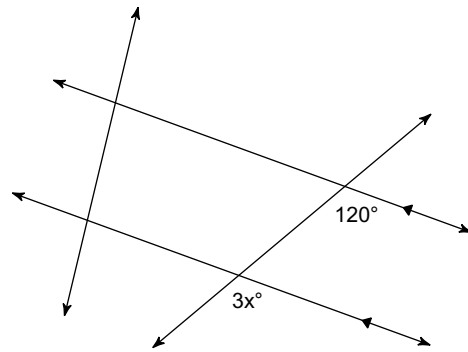
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10)

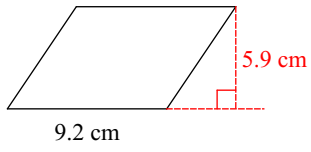


11)

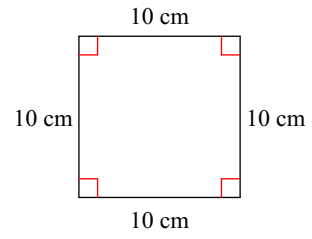


Find the area of each.

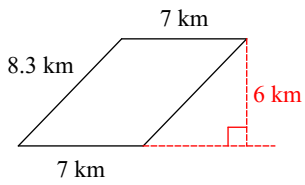
12)



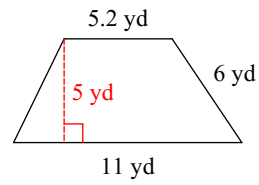
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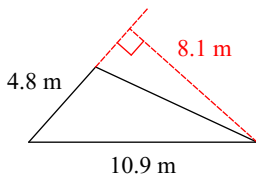
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15)

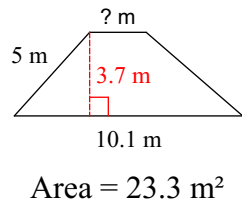


16)

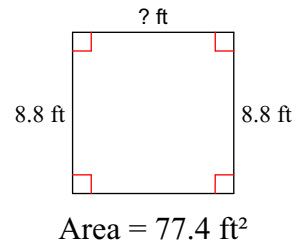


Find the missing measurement. Round your answer to the nearest tenth.

17)



18)



Write the slope-intercept form of the equation of the line described.

19) through: $(-3, 5)$, parallel to $y = -\frac{7}{3}x + 1$

20) through: $(-2, 1)$, perp. to $y = -\frac{3}{5}x + 4$

Solve each proportion.

21) $-\frac{x}{3} = \frac{9}{6}$

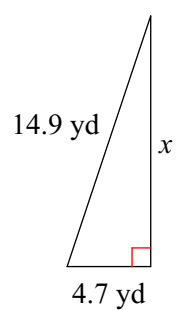
22) $\frac{7}{b-11} = \frac{11}{b-6}$

$$23) \frac{r+10}{r-1} = -\frac{6}{3}$$

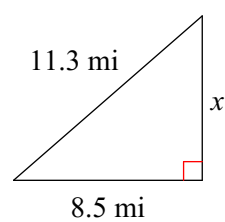
$$24) \frac{x-4}{x-2} = \frac{4}{12}$$

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.

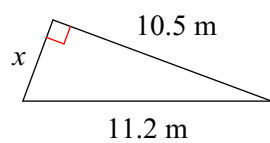
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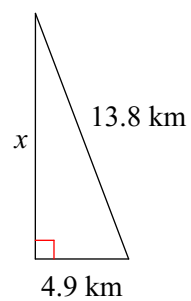
26)



27)

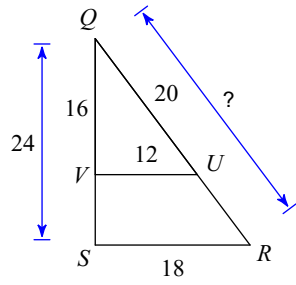


28)

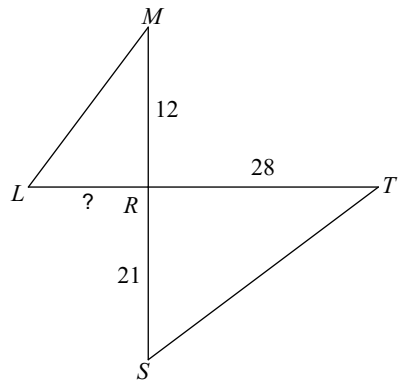


Find the missing length. The triangles in each pair are similar.

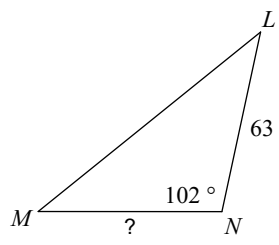
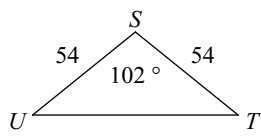
29)



30) $\triangle RST \sim \triangle RLM$

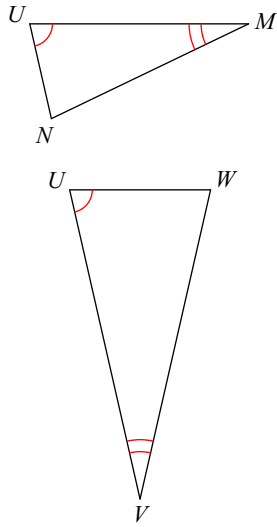


31) $\triangle NML \sim \triangle STU$

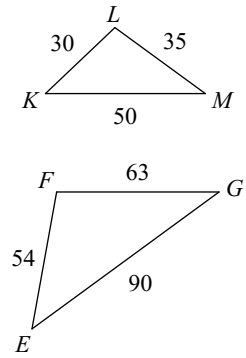


Make a flowchart to show why each pair of triangles is similar.

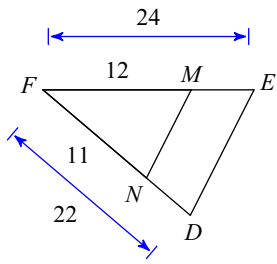
32) $\triangle UVW \sim \triangle UMN$



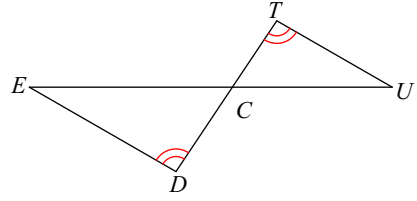
33) $\triangle EFG \sim \triangle KLM$



34)

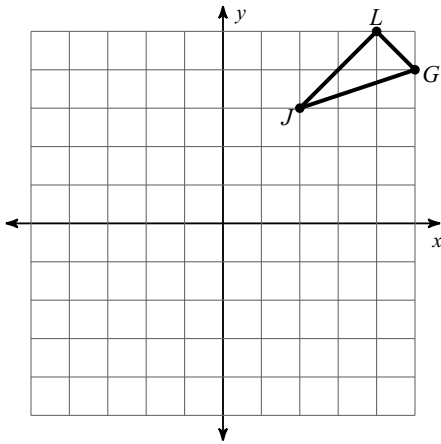


35)

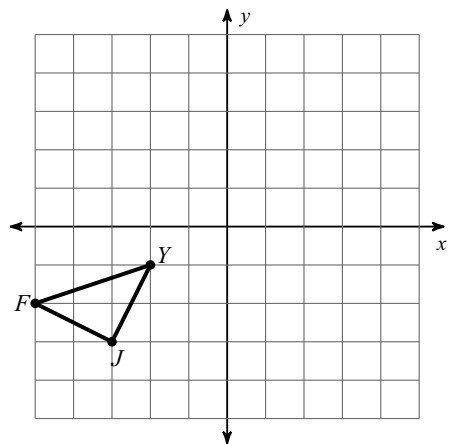


Graph the image of the figure using the transformation given.

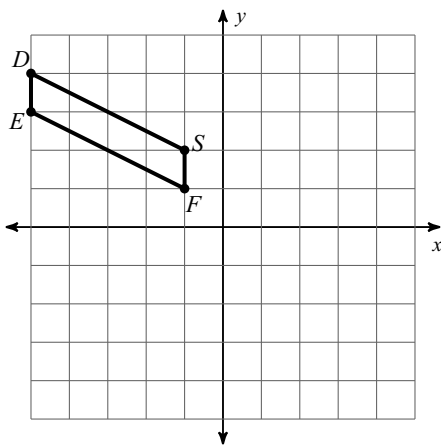
36) rotation 90° clockwise about the origin



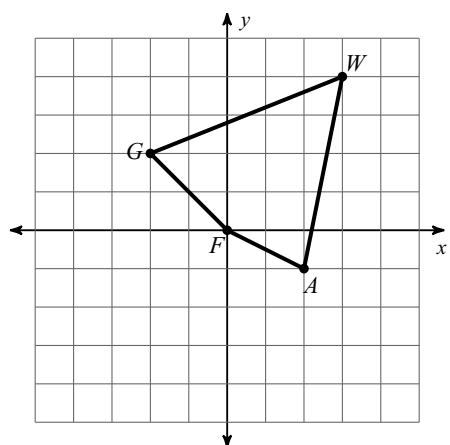
37) reflection across $x = -3$



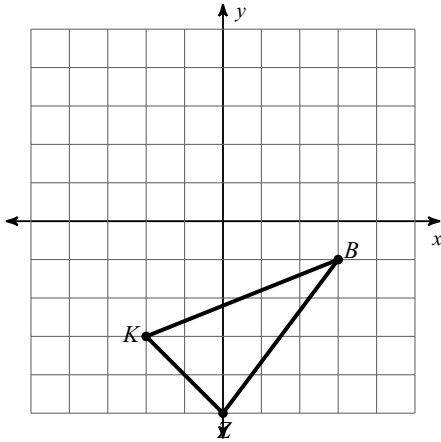
38) translation: 1 unit right and 5 units down



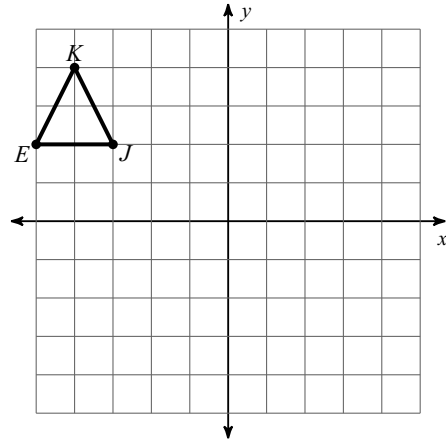
39) reflection across $y = 2$



40) rotation 180° about the origin



41) translation: 6 units right and 6 units down



State if the three numbers can be the measures of the sides of a triangle.

42) 7, 15, 7

43) 10, 2, 10

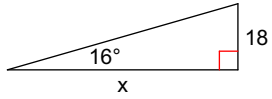
Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

44) 6, 6

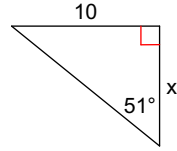
45) 9, 10

Find the missing side. Round to the nearest tenth. Show all work!

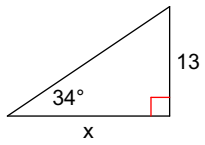
46)



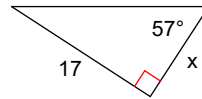
47)



48)



49)



Represent the sample space using an area model or tree diagram. Choose appropriately based on the situation. All events are equally likely.

50) A sandwich shop has four types of sandwiches: ham, turkey, chicken, and PB&J. Each sandwich can be ordered with white bread, multi-grain bread, or rye bread.

51) The chess club must decide when to meet for a practice. The possible days are Tuesday, Wednesday, or Thursday. The possible times are 3, 4, or 5 p.m.

52) A spinner can land on either red, blue, green, yellow, purple, or orange. You flip a coin and then spin the spinner.

53) An ice cream stand offers single-scoop waffle-cones or bowls. Four flavors are available: strawberry, chocolate, vanilla, and mint chocolate chip.

Create an area model or a tree diagram for the given situation and calculate the listed probabilities. Show all work.

54) A bag contains 3 black widgets and 5 white widgets. Paul picks a widget at random from the bag and replaces it back in the bag. He mixes the widgets in the bag and then picks another widget at random from the bag.

a.) $P(\text{pick two black widgets})$

b.) $P(\text{black widget in his second draw})$

c.) $P(\text{black widget and white widget})$

55) A penny, nickel, and dime are flipped one after the other. Each coin is altered so that each outcome is not equally likely. The penny has a $\frac{1}{3}$ chance of flipping a head, the nickel has a $\frac{1}{6}$ chance of flipping a head, and the dime has a $\frac{1}{4}$ chance of flipping a head.

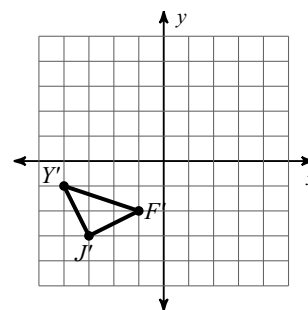
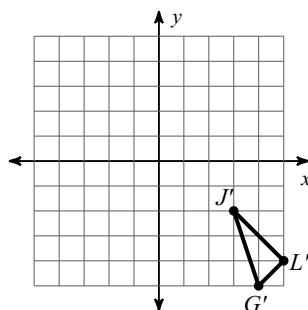
a.) P(3 heads)

b.) P(Not flipping 3 heads)

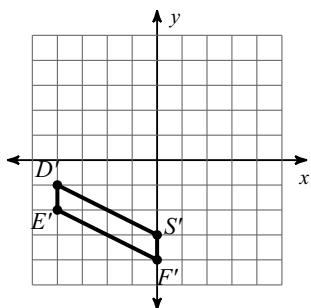
c.) P(2 heads and 1 tail)

Answers to Trimester Review

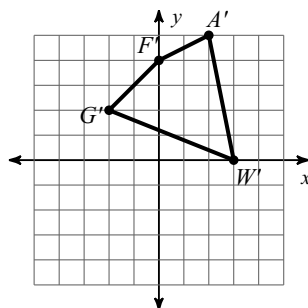
- | | | | |
|----------------------------|-----------------------------|-----------------------------|---------------------------------------|
| 1) $\{-3\}$ | 2) $\{-7\}$ | 3) $\{0\}$ | 4) (1,5) |
| 5) (0,0) | 6) (-3,-5) | 7) (-3,6) | 8) 34 |
| 9) 6 | 10) 16 | 11) 40 | 12) 54.28 cm ² |
| 13) 100 cm ² | 14) 42 km ² | 15) 40.5 yd ² | 16) 19.44 m ² |
| 17) 2.5 m | 18) 8.8 ft | 19) $y = -\frac{7}{3}x - 2$ | 20) $y = \frac{5}{3}x + \frac{13}{3}$ |
| 21) $\{-4.5\}$ | 22) $\{19.75\}$ | 23) $\{-2.66\}$ | 24) $\{5\}$ |
| 25) 14.1 yd | 26) 7.4 mi | 27) 3.9 m | 28) 12.9 km |
| 29) 30 | 30) 9 | 31) 63 | |
| 32) similar; AA similarity | 33) similar; SSS similarity | 34) similar; SAS similarity | |
| 35) similar; AA similarity | 36) | 37) | |



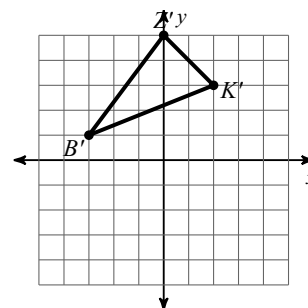
38)



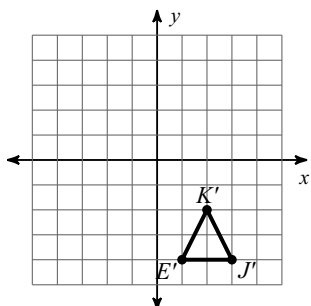
39)



40)



41)



42) No

43) Yes

44) $0 < x < 12$

45) $1 < x < 19$

46) 62.8

47) 8.1

48) 19.3

49) 11.0

50) $\{(H, W), (H, M), (H, R), (T, W), (T, M), (T, R), (C, W), (C, M), (C, R), (P, W), (P, M), (P, R)\}$

51) $\{(T, 3), (T, 4), (T, 5), (W, 3), (W, 4), (W, 5), (R, 3), (R, 4), (R, 5)\}$

52) $\{(H, R), (H, B), (H, G), (H, Y), (H, P), (H, O), (T, R), (T, B), (T, G), (T, Y), (T, P), (T, O)\}$

53) $\{(W, S), (W, C), (W, V), (W, M), (B, S), (B, C), (B, V), (B, M)\}$

54)

55)