

Name: \_\_\_\_\_

Due Date: \_\_\_\_\_

Teacher: \_\_\_\_\_

Parent Sign: \_\_\_\_\_

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Answers (1–50)

1.  $\frac{49}{2}$  or 24.5

2.  $c = 5$

3.  $(6+8)\frac{2}{2} = 14\frac{2}{2} = \frac{196}{2} = 98$

4.  $c = 10$

5.  $c = 13$

6.  $c = 17$

7.  $c = 15$

8.  $c = \sqrt{5}$

9.  $(4+3)\frac{2}{2} = \frac{49}{2} = 24.5$ ;  $c = 5$

10.  $c = 25$

11.  $c = 5$

12.  $c = 13$

13.  $c = 17$

14.  $c = 25$

15.  $c = 29$

16.  $c = 41$

17.  $c = 10$

18.  $c = \sqrt{13}$

19.  $c = 10 \cdot \sqrt{2}$

20.  $c = 37$

21.  $d = \frac{25}{13} \approx 1.9231$ ;  $e = \frac{144}{13} \approx 11.0769$

22.  $d = \frac{81}{15} = 5.4$ ;  $e = \frac{144}{15} = 9.6$

23.  $a = \sqrt{c \cdot d} = \sqrt{10 \cdot 4} = \sqrt{40} = 2 \cdot \sqrt{10}$

24.  $d = a \frac{2}{c} = \frac{36}{10} = 3.6$

25.  $h = (3 \cdot 4)/5 = \frac{12}{5} = 2.4$

26.  $h = (8 \cdot 15)/17 = \frac{120}{17} \approx 7.0588$

27.  $a = \sqrt{c \cdot d} = \sqrt{25 \cdot 9} = \sqrt{225} = 15$

28.  $e = \frac{400}{29} \approx 13.7931$

29.  $h = (7 \cdot 24)/25 = \frac{168}{25} = 6.72$

30.  $d = \frac{25}{13} \approx 1.923076923$ ;  $e = \frac{144}{13} \approx 11.07692308$

31.  $h = (9 \cdot 12)/15 = \frac{108}{15} = 7.2$

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32.  $d = \frac{16}{5} = 3.2$ ;  $e = \frac{9}{5} = 1.8$ ;  $h = \frac{12}{5} = 2.4$

33.  $b = \sqrt{17 \cdot 8} = \sqrt{136} = 2 \cdot \sqrt{34} \approx 11.6619$

34.  $d = \frac{144}{13} \approx 11.07692308$

35.  $c = \sqrt{2^2 + 11^2} = \sqrt{4 + 121} = \sqrt{125} = 5 \cdot \sqrt{5} \approx 11.18034$ ;  $d = \frac{4}{c} = 4 / (5 \cdot \text{sqrt}5) = (4)/(5\sqrt{5}) \approx 0.35777$

36. 5

37. 5

38. 5

39.  $\sqrt{52} = 2 \cdot \sqrt{13} \approx 7.2111$

40.  $\sqrt{41} \approx 6.4031$

41. 6

42. Legs: 5 and 6; hypotenuse:  $\sqrt{61} \approx 7.81025$

43.  $\sqrt{98} = 7 \cdot \sqrt{2} \approx 9.8995$

44. 12

45. Points on x-axis satisfying  $(x-5)^2 + 12^2 = 13^2$  give  $x = 0$  or  $x = 10$ . So  $(0, 0)$  and  $(10, 0)$ .

46.  $x^2 + 144 = 169 \rightarrow x = \pm 5$

47.  $x = \sqrt{10^2 - 8^2} = \sqrt{100 - 64} = \sqrt{36} = 6$

48. 6

49. 5 ft

50. side =  $\frac{10}{\text{sqrt}}(2) = 5 \cdot \sqrt{2} \approx 7.0711$