Exam 1 Chapter 3 Preparation 3.1 to 3.3
Winter 2010 V02

Name_____

Solve.

1) A bank loaned out $66,000, part of it at the rate of 15% per year and the rest at a rate of 4% per year. If the interest received was $6050, how much was loaned at 15%? 1) _____

2) A bank loaned out $50,000, part of it at the rate of 13% per year and the rest at a rate of 7% per year. If the interest received was $5240, how much was loaned at 13%? 2) _____

3) Melissa invested a sum of money at 3% annual interest. She invested three times that sum at 5% annual interest. If her total yearly interest from both investments was $7200, how much was invested at 3%? 3) _____

4) Melissa invested a sum of money at 3% annual interest. She invested three times that sum at 5% annual interest. If her total yearly interest from both investments was $3600, how much was invested at 3%? 4) _____

5) The manager of a candy shop sells chocolate covered peanuts for $7 per pound and chocolate covered cashews for $14 per pound. The manager wishes to mix 30 pounds of the cashews to get a cashew–peanut mixture that will sell for $8 per pound. How many pounds of peanuts should be used? 5) _____

6) The manager of a coffee shop has one type of coffee that sells for $5 per pound and another type that sells for $15 per pound. The manager wishes to mix 60 pounds of the $15 coffee to get a mixture that will sell for $9 per pound. How many pounds of the $5 coffee should be used? 6) _____

7) The manager of a coffee shop has one type of coffee that sells for $6 per pound and another type that sells for $13 per pound. The manager wishes to mix 30 pounds of the $13 coffee to get a mixture that will sell for $7 per pound. How many pounds of the $6 coffee should be used? 7) _____

8) The manager of a candy shop sells chocolate covered peanuts for $7 per pound and chocolate covered cashews for $15 per pound. The manager wishes to mix 100 pounds of the cashews to get a cashew–peanut mixture that will sell for $9 per pound. How many pounds of peanuts should be used? 8) _____

9) On a road trip, five friends drove at 50 miles per hour to California. On the way home, they took the same route but drove 70 miles per hour. How many miles did they drive on the way to California if the round trip took 10 hours? 9) _____

10) On a road trip, five friends drove at 60 miles per hour to California. On the way home, they took the same route but drove 75 miles per hour. How many miles did they drive on the way to California if the round trip took 10 hours? 10) _____

11) Jeff starts driving at 55 miles per hour from the same point that Lauren starts driving at 40 miles per hour. They drive in opposite directions, and Lauren has a half–hour head start. How long will they be able to talk on their cell phones that have a 290–mile range? 11) _____

12) Jeff starts driving at 55 miles per hour from the same point that Lauren starts driving at 40 miles per hour. They drive in opposite directions, and Lauren has a half–hour head start. How long will they be able to talk on their cell phones that have a 480–mile range? 12) _____

Solve the proportion.

13) $\frac{2}{7} = \frac{3}{x}$ 13) _____

14) $\frac{2}{7} = \frac{7}{x}$ 14) _____

15) $\frac{1}{x} = \frac{4}{25}$ 15) _____

16) $\frac{1}{x} = \frac{3}{28}$ 16) _____

17) $\frac{x + 6}{3} = \frac{x + 8}{6}$ 17) _____

18) $\frac{x + 6}{5} = \frac{x + 8}{7}$ 18) _____

19) $\frac{2x + 1}{x} = \frac{3}{2}$ 19) _____

20) $\frac{2x + 3}{x} = \frac{3}{2}$ 20) _____

21) $\frac{7}{12} = \frac{4x}{3}$ 21) _____

22) $\frac{11}{9} = \frac{2x}{3}$ 22) _____

23) $\frac{x + 5}{x} = \frac{3}{2}$ 23) _____

24) $\frac{x+3}{x} = \frac{2}{7}$ 24) _____

Solve.

25) It takes Frank 20 minutes to type and spell check 14 pages. Find how many pages he can type and spell check in 4.5 hours. Round answers to the nearest tenth if necessary. 25) _____

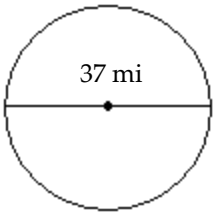
26) It takes Mike 24 minutes to type and spell check 10 pages. Find how many pages he can type and spell check in 1.5 hours. Round answers to the nearest tenth if necessary. 26) _____

27) On an architect's blueprint, 1 inch corresponds to 4 feet. If an exterior wall is 12 feet long, find how long the blueprint measurement should be. Write answer as a mixed number if necessary. 27) _____

28) On an architect's blueprint, 1 inch corresponds to 9 feet. If an exterior wall is 51 feet long, find how long the blueprint measurement should be. Write answer as a mixed number if necessary. 28) _____

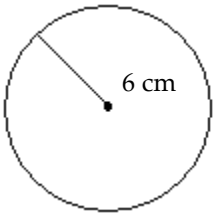
Use the formula for the area or circumference of a circle to solve the problem. Where applicable, express answers in terms of π.

29) 29) _____



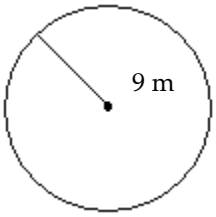
Give the exact circumference.

30) 30) _____



Find the area of the circle.

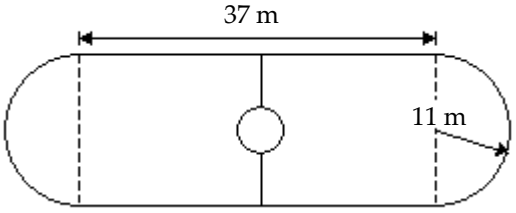
31) 31) _____



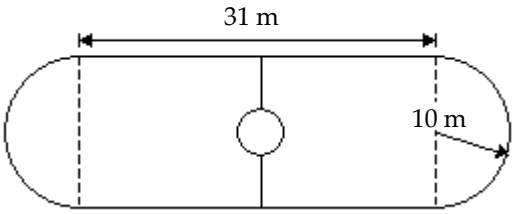
Find the area of the circle.

Solve.

32) Find the area of the skating rink. Use $\pi = 3.14$ and round to the nearest tenth. 32) _____

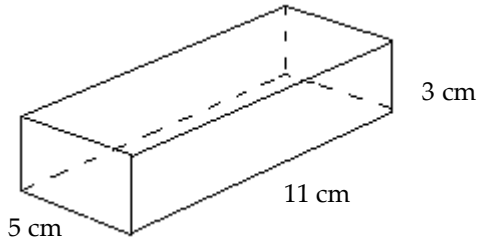


33) Find the area of the skating rink. Use $\pi = 3.14$ and round to the nearest tenth. 33) _____

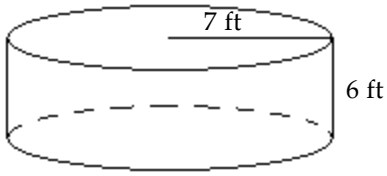


Find the volume of the figure. Where applicable, express answers in terms of π.

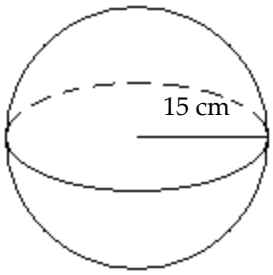
34) 34) _____



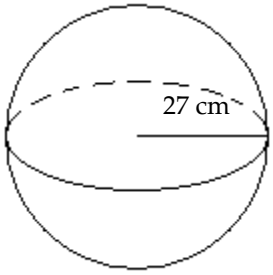
35) 35) _____



36) 36) _____



37) 37) _____



Find the measure of the indicated angle.

38) Find the measure of the complement of 84°. 38) _____

39) Find the measure of the supplement of 36°. 39) _____

40) Find the measure of the supplement of 108°. 40) _____

41) The angle's measure is 60° more than that of its complement. 41) _____

42) The angle's measure is 70° more than that of its supplement. 42) _____

43) The angle's measure is 60° more than triple that of its supplement. 43) _____

44) The angle's measure is 70° more than that of its complement. 44) _____

45) The angle's measure is 50° more than that of its supplement. 45) _____

1) $31,000
2) $29,000
3) $40,000
4) $20,000
5) 180 pounds
6) 90 pounds
7) 180 pounds
8) 300 pounds
9) 291.7 miles
10) 333.3 miles
11) 2.8 hours
12) 4.8 hours
13) $\left\{\frac{21}{2}\right\}$
14) $\left\{\frac{49}{2}\right\}$
15) $\left\{\frac{25}{4}\right\}$
16) $\left\{\frac{28}{3}\right\}$
17) {–4}
18) {–1}
19) {–2}
20) {–6}
21) $\left\{\frac{7}{16}\right\}$
22) $\left\{\frac{11}{6}\right\}$
23) {10}
24) $\left\{-\frac{21}{5}\right\}$
25) 189 pages
26) 37.5 pages
27) 3 inches
28) $5\frac{2}{3}$ inches
29) 37π mi
30) 36π cm^2
31) 81π m^2
32) 1193.9 sq. m
33) 934 sq. m
34) 165 cm^3
35) 294π ft^3
36) 4500π cm^3
37) $26{,}244\pi$ cm^3
38) 6°
39) 144°

40) 72°
41) 75°
42) 125°
43) 150°
44) 80°
45) 115°