Area and volume Worksheet

Geometry and Trigonometry

Name _____ Date _____

Warm-up

1. A rectangle is 5 by 3. Find its area.

2. A circle has radius 7. Find its area. Use pi in your answer.

3. A prism has a base area of 28 and a height of 12. Find its volume.

4. A triangle has base 4 and height 15. Find its area.

5. A circle has radius 3. Find its circumference. Use pi in your answer.

Practice

6. A 11 by 12 rectangle has a 4 by 4 corner removed. What's the area left?

7. A circle has diameter 16. Find its area. Use pi in your answer.

8. A box is 3 by 4 by 2. Find its surface area.

9. A triangle has area 32 and base 16. Find the height.

10. A slice is $\frac{1}{4}$ of a circle with radius 2. Find its area. Use pi in your answer.

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11. A cone has radius 3 and height 3. Find its volume. Use pi in your answer.

12. A trapezoid has bases 5 and 9, and height 6. Find its area.

13. A circle's area is 121π. Find its radius.

Challenge

14. A rectangle's length is doubled and its width is tripled. By what factor does the area grow?

15. If a circle's radius triples, its area is multiplied by...
    (A) 6 (B) 3 (C) 9 (D) π

16. A box's volume is 140. Its base is 7 by 5. Find its height.

17. Square tiles of side 11 cm cover a floor 77 cm by 77 cm. How many tiles?

18. A square has side 2, with the largest possible circle inside it. Find the shaded area outside the circle. Use pi in your answer.

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Area and volume Worksheet: Answer Key

Geometry and Trigonometry

1. 15

   Multiply.

2. 49π

   $\pi(7)^2$.

3. 336

   Base times height.

4. 30

   $\frac{1}{2} \times 4 \times 15$.

5. 6π

   $2\pi(3)$.

6. 116

   Big minus small.

7. 64π

   Radius is 8.

8. 52

   Three pairs of faces.

9. 4

   $32 = \frac{1}{2}(16)h$.

10. 1π

    $\frac{1}{4}\pi(2)^2$.

11. 9π

    $\frac{1}{3}\pi(3)^2(3)$.

12. 42

    Average the bases, then multiply.

13. 11

    $r^2 = 121$.

14. 6

    2×3.

15. (C) 9

    Area depends on r^2.

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16. 4

    $140 = 7 \times 5 \times h$.

17. 49

    7 across and 7 down.

18. $4 - 1\pi$

    Square: 4. Circle radius 1.

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