Mr. Abdulkader Amro

1. Which of these numbers is a perfect square: 50, 20, 25, or 15?
   a. 50   b. 20   c. 25   d. 15

2. What is the side length of a square with area 25 cm²?
   a. 5 cm   b. 12.5 cm   c. 6.25 cm   d. 20 cm

3. Find 8^2.
   a. 8   b. 64   c. 16   d. 32

4. Which whole number is $\sqrt{8}$ closer to?
   a. 5   b. 4   c. 3   d. 2

5. The area of square P is 52 cm².
   Square Q has an area equal to one quarter the area of square P.
   Find the approximate side length of square Q.
   Give your answer to 1 decimal place.
   a. 3.6 cm   b. 5.1 cm   c. 13 cm   d. 1.8 cm

6. Find the length of the hypotenuse. Give your answer to 1 decimal place.
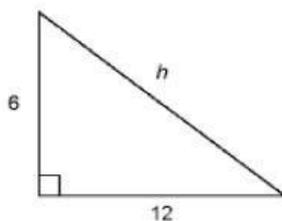

   a. 144.0   b. 10.4   c. 13.4   d. 36.0

8. In a right triangle, the length of the hypotenuse is 18 m and the length of one of the legs is 15 m.
   Find the length of the other leg. Round your answer to the nearest tenth.
   a. 5.0 m   b. 6.8 m   c. 9.9 m   d. 23.4 m

9. This diagram shows 2 flag poles that are 4.5 m tall. The distance from the top of the left pole to the
   base of the right pole is 7.5 m. What is the distance between the 2 flag poles?
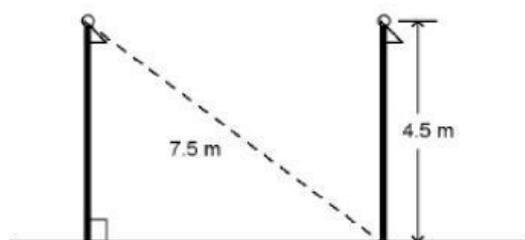
   a. 5.0 m   b. 6.0 m   c. 3.0 m   d. 4.5 m

10. Find the product $(+5) \times (-9)$. Use a number line if necessary.
    a. −45   b. +45   c. +14   d. −4

7. The area, in square centimetres, of the square on each side of a triangle is given. Which triangle is NOT a right triangle?
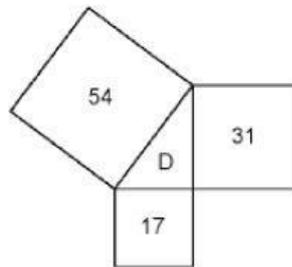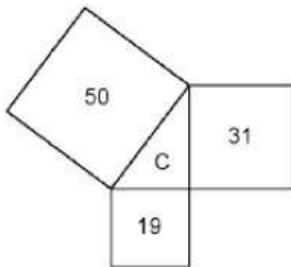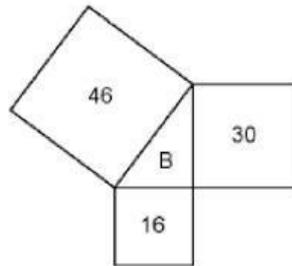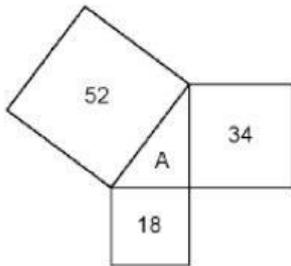
a.   Triangle D   b.   Triangle C   c.   Triangle B   d.   Triangle A

11. Replace □ with an integer to make the equation true.
    $\square \times (-5) = -30$
    a.   +6   b.   −6   c.   −25   d.   +25

12. Find this product. $(-15) \times (-8)$
    a.   −120   b.   +120   c.   +23   d.   −23

13. Find the quotient $(-21) \div (-3)$. Use a number line if it helps.
    a.   −24   b.   −7   c.   −18   d.   +7

14. Evaluate. $9 + (-7) - (-4)$
    a.   6   b.   −2   c.   12   d.   20

15. Evaluate. $(-6)[(-3) + 9]$
    a.   72   b.   −36   c.   −72   d.   27

16. Evaluate. $-13 + 9 \div (-3) + 9$
    a.   1   b.   −1   c.   7   d.   −7

17. Multiply. $2 \times \dfrac{7}{12}$

     a. $\dfrac{7}{24}$ b. $\dfrac{7}{6}$ c. $\dfrac{3}{4}$ d. $\dfrac{31}{12}$

18. Find this product. $\dfrac{4}{5} \times \dfrac{15}{20}$

     a. $\dfrac{19}{25}$ b. $\dfrac{2}{3}$ c. $\dfrac{3}{5}$ d. $\dfrac{19}{100}$

19. Find the reciprocal of $\dfrac{2}{11}$.

     a. $\dfrac{-11}{2}$ b. $\dfrac{-2}{-11}$ c. $\dfrac{-2}{11}$ d. $\dfrac{11}{2}$

20. Write $3\dfrac{2}{3}$ as an improper fraction.

     a. $\dfrac{11}{3}$ b. $\dfrac{5}{3}$ c. $\dfrac{8}{3}$ d. $\dfrac{15}{3}$

21. Multiply. $1\dfrac{1}{3} \times 2\dfrac{1}{3}$

     a. $3\dfrac{1}{9}$ b. $2\dfrac{1}{9}$ c. $1\dfrac{2}{9}$ d. $3\dfrac{2}{3}$

22. Find this quotient. $8 \div \dfrac{1}{3}$

     a. 24   b. $2\dfrac{2}{3}$ c. $\dfrac{3}{8}$ d. $\dfrac{1}{24}$

23. Find this quotient. $\dfrac{8}{12} \div 4$

     a. 6   b. $\dfrac{1}{6}$ c. $\dfrac{2}{3}$ d. $\dfrac{8}{3}$

24. Find this quotient. $\dfrac{5}{3} \div \dfrac{15}{7}$

     a. $3\dfrac{4}{7}$ b. $\dfrac{7}{9}$ c. $\dfrac{7}{15}$ d. $2\dfrac{2}{15}$

25. Divide. $\dfrac{4}{5} \div \dfrac{5}{4}$

     a. 1   b. $\dfrac{16}{25}$ c. $1\dfrac{9}{16}$ d. $\dfrac{8}{25}$

26. Divide. $2\frac{1}{3} \div 2\frac{1}{2}$

    a. $\frac{14}{15}$ b. $5\frac{5}{6}$ c. $\frac{2}{3}$ d. $1\frac{1}{14}$

27. Which operation would you do first?

$$\frac{5}{6} \times \left(\frac{6}{7} + \frac{7}{8} \right) \div \frac{8}{7} - \frac{5}{6}$$

    a. Addition   b. Subtraction   c. Multiplication   d. Division
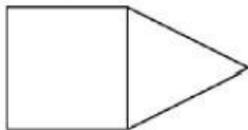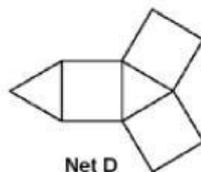
28. Which operation would you do first?

$$\left(\frac{5}{6} - \frac{7}{8} \right) \times \frac{6}{7} \div \frac{5}{6} + \frac{6}{5}$$

    a. Addition   b. Subtraction   c. Multiplication   d. Division

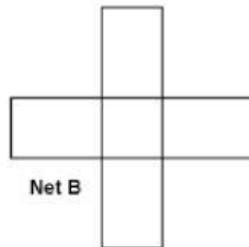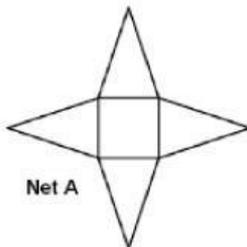29. Evaluate. $\frac{2}{3} + \frac{3}{5} \times \frac{15}{4}$

    a. $2\frac{11}{12}$ b. $4\frac{3}{4}$ c. $1\frac{1}{4}$ d. $2\frac{1}{12}$

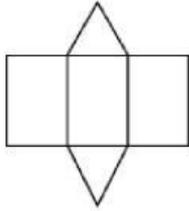30. This is an incomplete net for a triangular prism. What shapes do you add to complete this net?

    a. 3 squares   c. 1 triangle and 3 squares
    b. 1 triangle and 2 squares   d. 3 triangles

31. Which diagram is the net for a square pyramid?
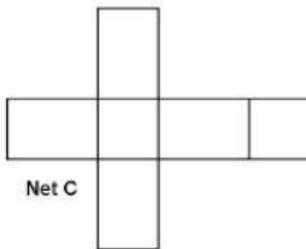
Net A

Net B

Net C

Net D

    a. Net A   b. Net B   c. Net C   d. Net D

32. Name the polyhedron that can be made from this net.
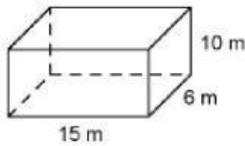
a. Rectangular pyramid   c. Rectangular prism
b. Triangular prism   d. Triangular pyramid

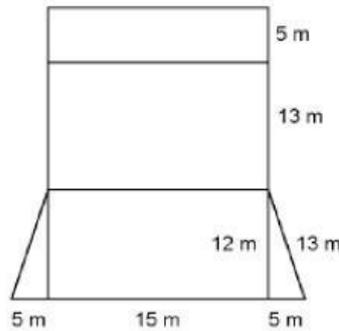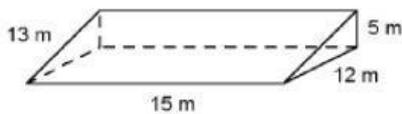33. How many triangular faces are there in a pentagonal pyramid?
a. 1   b. 5   c. 2   d. 3

34. Find the surface area of this right rectangular prism.

10 m
6 m
15 m

a. 420 m²   b. 300 m²   c. 600 m²   d. 480 m²

35. Use the net to find the surface area of the right triangular prism.

13 m   5 m
12 m
15 m

5 m
13 m
12 m   13 m
5 m   15 m   5 m
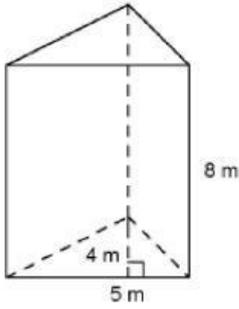
a. 90 m²   b. 585 m²   c. 510 m²   d. 2340 m²

36. A right rectangular prism measures 9 cm by 7 cm by 10 cm. What is the volume of the prism?
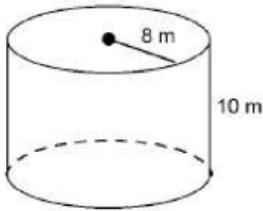a. 630 cm³   b. 104 cm³   c. 223 cm³   d. 156 cm³
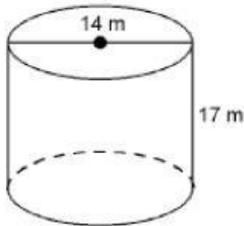
37. Find the volume of this triangular prism.

8 m

4 m

5 m

   a.   160 m³   b.   80 m³   c.   320 m³   d.   184 m³

38. Find the surface area of this cylinder to the nearest square metre.

8 m

10 m

   a.   905 m²   b.   704 m²   c.   653 m²   d.   452 m²

39. Find the volume of this cylinder. Round your answer to the nearest tenth.

14 m

17 m

   a.   747.7 m³   b.   373.8 m³   c.   2616.9 m³   d.   238 m³

40. Write 76% as a decimal.
   a.   7.6   b.   0.76   c.   0.076   d.   76