1. The set of integers is a subset of:

A. the set of irrational numbers.

B. the set of whole numbers.

C. the set of natural numbers.

D. the set of real numbers.

E. the set of negative numbers.

2. Subtract. $6.5 - 8.1$

A. -1.6

B. -2.4

C. 1.6

D. -14.6

E. 2.4

3. Find the area of a triangular window with the given base and height.
Base = 4.3 m Height = 7 m

A. $30.1\ m^2$

B. $15.05\ m^2$

C. $22.6\ m^2$

D. $15.5\ m^2$

E. $60.2\ m^2$

4. Divide. $\left(-\frac{5}{12}\right)\div\left(-\frac{10}{15}\right)$

A. $\frac{5}{18}$

B. $\frac{8}{5}$

C. $-\frac{5}{8}$

D. $-\frac{25}{36}$

E. None of these.

5. Simplify completely. $\frac{2^3-3\cdot 6}{4+|7-8|}$

A. 6

B. $-\frac{10}{19}$

C. –2

D. $\frac{30}{19}$

E. $-\frac{10}{3}$

6. Simplify completely. $-2\left(m^2-7m\right)+3\left(6m+m^2\right)$

A. $-m^2+4m$

B. $16m^2+17m$

C. m^2+4m

D. m^2+32m

E. None of these.

7. Solve. $\frac{1}{3}(9x+6)-5=11$

A. $x=6$

B. $x=\frac{10}{3}$

C. $x=\frac{22}{3}$

D. $x=\frac{14}{3}$

E. $x=\frac{8}{3}$

8. Three consecutive odd integers are such that the sum of twice the first, the second, and three times the third is 80. Set up the equation necessary to find the integers. Do not solve.
Let *n* represent the first integer.

A. $2n+(n+1)+3(n+2)=80$

B. $2n+(n+2)+3(n+3)=80$

C. $2n+(n+2)+(3n+3)=80$

D. $2n+(n+1)+(3n+2)=80$

E. $2n+(n+2)+3(n+4)=80$

9. At a 20%-off sale, an outfit Cassie tries on has a sale price of $38.40. What was the original price of the outfit?

A. less than $47.50

B. at least $47.50 but less than $48.25

C. at least $48.25 but less than $49.00

D. at least $49.00 but less than $49.75

E. at least $49.75

10. Solve $P=\frac{2}{7}mv$ for m.

A. $m=\frac{2P}{7v}$

B. $m=\frac{7}{2}Pv$

C. $m=\frac{P-2v}{7}$

D. $m=\frac{P-7}{2v}$

E. $m=\frac{7P}{2v}$

11. An airplane which can travel at a rate of 410 km/h in still air is traveling into a 60 km/h headwind. How long will it take the plane to travel 525 km?

A. 1.28 hours

B. 1.50 hours

C. 1.12 hours

D. 1.13 hours

E. 1.43 hours

12. Divide and simplify. $\frac{\left(4x^2y^3\right)^2}{8x^0y^3}$

A. x^4y^3

B. $2x^3y^2$

C. x^4y^2

D. $2x^4y^3$

E. x^3y^3

13. Simplify. Do not leave negative exponents in your answer.

$$\left(\frac{a^{-5}b^{7}}{5a^{-4}b^{-1}}\right)^{3}$$

A. $\dfrac{1}{15a^{3}b^{6}}$

B. $\dfrac{b^{24}}{125a^{3}}$

C. $\dfrac{b^{6}}{125a^{3}}$

D. $\dfrac{b^{24}}{15a^{27}}$

E. $\dfrac{b^{18}}{15a^{27}}$

14. Multiply. $\left(1.3\times10^{-6}\right)\left(5.0\times10^{2}\right)$

A. 6.5×10^{-12}

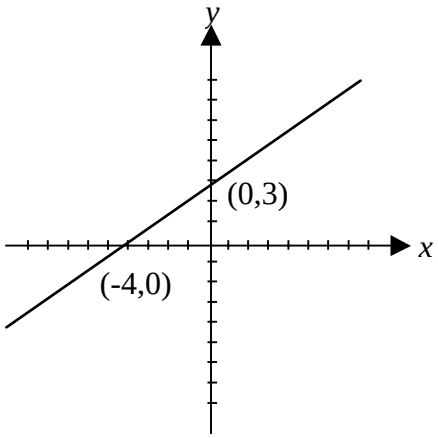
B. 65.0×10^{-12}

C. 6.5×10^{-4}

D. 65.0×10^{-4}

E. 6.5×10^{-3}

15. Choose the correct equation for this graph.



A. $y=-4x+3$

B. $y=3x-4$

C. $y=\dfrac{4}{3}x+3$

D. $y=\dfrac{4}{3}x-4$

E. $y=\dfrac{3}{4}x+3$