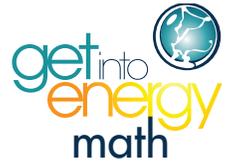


Name: \_\_\_\_\_ Date: \_\_\_\_\_



**Get Into Energy Math**  
**Quiz 12 Answer Key**  
**Fractions and Decimals**

1. Kemen is pulling wire for an upgrade project. Kemen and the crew have pulled 400 feet of the 500 feet required to complete the job. What fraction of the wire pulling has the crew completed?

- A. 75% of the wire
- B. 500/400 of the wire
- C. 4/5 of the wire - Correct Answer**
- D. 25% of the wire

2. Laura's crew is settling poles for a power upgrade project. The crew has set 5 of the 8 poles for the project. What fraction of the total project has the crew completed?

- A. 63% of the project
- B. 5/8 of the project - Correct Answer**
- C. 8/5 of the project
- D. 16% of the project

3. The line crew is using wedge fittings to tie in transformers for a new overhead line system. The crew has 18 wedge connectors total, 9 on each of the two line trucks. One crew has used  $\frac{4}{9}$  of the wedge connectors and the other crew has used  $\frac{6}{9}$  of the wedge connectors. Instead of saying  $\frac{10}{9}$  of the connectors were used, which of the fractions below could be used to report the connectors that were used?

- A.  $1 \frac{1}{3}$  of the connectors used
- B.  $1 \frac{1}{9}$  of the connectors used - Correct Answer**
- C. 33% of the connectors used
- D.  $\frac{8}{9}$  of the connectors used

4. The line crew is using wedge fittings to tie in transformers for a new overhead line system. The crew has 18 transformers to tie in and each transformer uses 1 wedge connector. The crew has completed 8 of the 18 transformers. What fraction of the 18 wedge connectors have been used?

- A. 47% of the wedge connectors
- B.  $10/18$  of the wedge connectors
- C. 53% of the wedge connectors
- D.  $4/9$  of the wedge connectors - Correct Answer**

5. Cassandra, a plant operator, has inspected 3 of the total 4 boilers in the plant. What fraction of the boilers has she inspected?

- A.  $4/3$  of the boilers
- B.  $3/4$  of the boilers - Correct Answer**
- C. 75% of the boilers
- D. 67% of the boilers

6. The line crew is running ground wires for overhead sensing insulators. The crew used  $1/2$  of a spool for one job,  $1/4$  of a spool for another, and  $1/6$  of a spool for the final job. What fraction of the ground line spool remains?

- A.  $11/12$  of a spool
- B.  $1/3$  of a spool
- C.  $1 \frac{1}{3}$  of a spool
- D.  $1/12$  of a spool - Correct Answer**

7. Lynne and her line crew were notified that down ground wires are missing from multiple poles in the town. The crews have to do a drive-by inspection, identify how many poles will need new down ground wires, and record their inspections in mileage inspected. The crews completed the following mileage of inspections:  $1\frac{3}{4}$  miles,  $5\frac{1}{2}$  miles,  $3\frac{1}{3}$  miles, and  $8\frac{1}{6}$  miles. How many miles did the crews inspect?

- A.  $17\frac{3}{4}$  miles
- B. 18 miles
- C.  $18\frac{2}{5}$  miles
- D.  $18\frac{3}{4}$  miles - Correct Answer**

8. Transformer visual inspections take  $\frac{1}{3}$  of an hour to complete. Pete's line crew has 10 inspections to complete. How many hours of inspections will the crew need for all 10 of the inspections?

- A.  $3\frac{1}{3}$  hours - Correct Answer**
- B. 3 hours
- C. 30 hours
- D. 5 hours

9. Darren has  $3\frac{2}{3}$  boxes of 100-amp fuses on the line trucks, but the overhead line distribution crew needs 4 times as many boxes to respond to a significant power outage. How many boxes of 100-amp fuses does Darren have to get out of the warehouse to restock the line trucks as the overhead linemen requested?

- A.  $14\frac{2}{3}$  boxes - Correct Answer**
- B.  $12\frac{2}{3}$  boxes
- C.  $14\frac{1}{3}$  boxes
- D.  $13\frac{2}{3}$  boxes

10. While reviewing inventory, Enrique noted there were  $16 \frac{1}{2}$  gallons of lube oil for the backup generator. If the generator takes  $8 \frac{3}{4}$  gallons of oil, how much oil will be left in inventory after the next generator oil change?

A.  $8 \frac{1}{4}$  gallons

**B.  $7 \frac{3}{4}$  gallons - Correct Answer**

C.  $7 \frac{1}{2}$  gallons

D.  $8 \frac{1}{2}$  gallons

11. Kari is performing preventive maintenance on a group of 6 hydraulic valves by changing out the hydraulic fluid. If each valve has a hydraulic fluid capacity of  $\frac{1}{8}$  gallons, how many gallons of hydraulic fluid will Kari use?

A.  $\frac{8}{6}$  or  $1 \frac{1}{3}$  gallons

B.  $\frac{1}{6}$  gallons

**C.  $\frac{6}{8}$  or  $\frac{3}{4}$  gallons - Correct Answer**

D.  $\frac{2}{3}$  gallons

12. Enrique, after restocking supplies in the plant's four watch stations, notes that there were  $1 \frac{1}{2}$  boxes of ear plugs at each station. How many total boxes of ear plugs were in all four watch stations?

**A. 6 boxes - Correct Answer**

B.  $4 \frac{1}{2}$  boxes

C.  $\frac{4}{2}$  or 2 boxes

D. 5 boxes

13. Enrique is a stock handler responsible for restocking the gas distribution trucks at the end of the day. Enrique finds one truck has  $\frac{1}{4}$  of a case of plastic gas fittings remaining. The other truck has  $\frac{1}{3}$  of a case of plastic fittings remaining. What fraction of a case has Enrique found on the 2 trucks?

- A.  $\frac{1}{12}$  of a case
- B.  $\frac{1}{6}$  of a case
- C.  $\frac{2}{7}$  of a case
- D.  $\frac{7}{12}$  of a case - Correct Answer**

14. Jill is an apprentice gas distribution mechanic. She is inspecting residential gas meters on homes in a local neighborhood. Jill has  $3\frac{1}{3}$  miles to inspect on one street and  $2\frac{1}{5}$  miles on another. How many miles does Jill have to inspect?

- A.  $5\frac{1}{8}$  miles
- B.  $5\frac{1}{4}$  miles
- C.  $5\frac{8}{15}$  miles - Correct Answer**
- D.  $5\frac{1}{15}$  miles

15. Bill is checking the current transformers on an industrial meter. The proper reading should be 1 ampere. Bill found that the current transformer was reading 0.972 amperes. How would Bill report his findings as a percentage of the proper reading of 1 ampere?

- A. 97.2% - Correct Answer**
- B. 9.72%
- C. 0.972%
- D. 0.0972%

16. Bob and his crew were assigned to install ground rods at the base of the utility poles in a new subdivision. When the crew stopped for lunch, they had installed 66% of the ground rods and had 34% remaining. How would the crew express the amount of remaining work in a decimal?

- A. 0.66 of the rods remaining
- B. 3.40 of the rods remaining
- C. 0.34 of the rods remaining - Correct Answer**
- D. 0.034 of the rods remaining

17. Ned is using a welding gage to read the depth of a root weld for welding two lengths of pipe together. Ned's reading indicates  $\frac{3}{16}$  inches of a root weld gap. How would Ned report his reading in a decimal?

- A. 1.88 inches
- B. 0.188 inches - Correct Answer**
- C. 0.0187 inches
- D. 0.0531 inches

18. Mateo and the gas distribution crew have reported to a customer's complaint of the smell of natural gas on a rural road. The crew is using a gas meter and has walked 0.12 miles of the 1-mile road. What percentage of the road has Mateo's crew inspected?

- A. 1.2%
- B. 0.12%
- C. 12% - Correct Answer**
- D. 120%

19. Bret is reviewing piping system drawings prior to starting the piping installation in an industrial park. The crew is in a hurry to get started but Bret has only reviewed 62% of all the piping diagrams and he still has 38% of the drawings to review. How would Bret report to the crew in decimal form how many more drawings he needs to review prior to starting work?

**A. 0.38 of the drawings - Correct Answer**

B. 3.80 of the drawings

C. 38.0 of the drawings

D. 0.038 of the drawings

20. Matt and the line crew are pulling wire for an overhead system upgrade. They have 220 feet of wire to pull. After the first two hours, they had pulled 60 feet. Sixty feet is what percentage of the entire job?

A. 45%

**B. 27.3% - Correct Answer**

C. 36.6%

D. 30%

21. Laura and her line crew are pulling wire for a new subdivision. The spool on the truck has 600 feet of primary copper wire. The crew used 28% of the spool in the morning. How many feet of wire did the crew use?

A. 432 ft

B. 214 ft

C. 386 ft

**D. 168 ft - Correct Answer**

22. Tom and his line crew are looking for a fault in a direct buried cable leading to a home. The crew has completed 30%, or 36 feet, using the pinpointer fault detection equipment. How many feet of the total cable will the crew be inspecting?

- A. 61 ft
- B. 108 ft
- C. 51 ft

**D. 120 ft - Correct Answer**

23. Bart, a plant operator, has been asked to dispatch 150 MW-h of energy to the transmission inter-tie substation during his current shift. Thus far, he has dispatched 90 MW-h. What percentage of the total energy remains to be dispatched?

- A. 25%
- B. 60%
- C. 167%

**D. 40% - Correct Answer**

24. Chin, a plant operator, has been asked to adjust the flow of power from the plant to the Hinkson Creek substation to 4.5 MW. If Hinkson Creek is currently drawing 40% of that amount, how much additional power in MW must Chin feed to Hinkson?

**A. 2.7 MW - Correct Answer**

- B. 4.10 MW
- C. 1.80 MW
- D. 2.75 MW

25. Tammy and her gas distribution mechanics are completing fusions for gas pipes in a residential neighborhood. The crew has to complete 130 fusions to complete the entire neighborhood. After the first day the crew had completed 20 fusions. What percentage of the fusions has the crew completed?

A. 35%

B. 26%

**C. 15% - Correct Answer**

D. 42%